California Independent System Operator Corporation

June 26, 2025

The Honorable Debbie-Anne A. Reese
Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 20246

Re: California Independent System Operator Corporation
Docket No. ER25-____-000

Tariff Amendment to Make a Targeted Enhancement to the Congestion Revenue Allocation Methodology for the Extended Day-Ahead Market

Dear Secretary Reese:

The California Independent System Operator Corporation (CAISO) submits this tariff amendment to make a targeted enhancement to the methodology for allocating congestion revenue under the Extended Day-Ahead Market (EDAM)[1] design. Specifically, the proposed enhancement modifies the allocation of congestion revenues among balancing areas participating in EDAM, *i.e.,* the day-ahead market only, resulting in a portion of day-ahead parallel flow congestion revenues being allocated to the EDAM balancing area where market participants paid prices that include those congestion costs, rather than to the balancing area where the constraint occurs. The EDAM balancing area receiving the parallel flow congestion revenue will make it available to transmission providers in their balancing area, who in turn can use it to manage the cost of congestion by those customers exercising firm transmission service rights under the tariffs of those transmission providers based on the Commission's *pro forma* Open Access Transmission Tariff (OATT).

This enhancement is intended for "day one" EDAM implementation on May 1, 2026, and designed as a transitional measure while the CAISO and its stakeholders consider and develop further enhancements to achieve the ultimate goal of developing a long-term framework for congestion revenue allocation. The

[1] The CAISO submits this filing pursuant to section 205 of the Federal Power Act (FPA), 16 U.S.C. § 824d, and part 35 of the Commission's regulations, 18 C.F.R. part 35. Capitalized terms not otherwise defined herein have the meanings set forth in appendix A to the CAISO Tariff, and references herein to specific tariff sections are references to sections of the CAISO Tariff unless otherwise specified.

proposed enhancement is a just and reasonable approach to addressing stakeholder questions and concerns raised in the past several months regarding the Commission-approved congestion revenue allocation methodology for EDAM under the CAISO Tariff. It will promote timely and expanded EDAM participation, thus allowing customers in the Western United States to realize the substantial benefits from EDAM without delay, while also mitigating the abruptness of transitioning to an organized market under the approved design.

This enhancement demonstrates the CAISO's commitment to working with stakeholders in an open and collaborative manner and to holistically consider and address diverse stakeholder interests on a complex issue. Most stakeholders providing comments in the expedited stakeholder initiative that led to the proposed enhancement either broadly support, or do not oppose, this tariff amendment. Those stakeholders raising concerns generally prefer alternative approaches that cannot be implemented by day one of EDAM.

As discussed below, the proposed transitional enhancement will provide overall benefits to customers and address significant stakeholder questions about congestion cost exposure under EDAM in a just and reasonable manner. These benefits outweigh the concerns raised by some stakeholders. Further, having a Commission-approved enhanced congestion revenue allocation methodology on day one of EDAM will support additional analysis that can inform the consideration of further enhancements and set the course to a long-term stable design that everyone desires. The CAISO is already preparing to institute a stakeholder process to explore potential near-term enhancements and a long-term design for the congestion revenue allocation approach under EDAM. Further, the CAISO will report progress on these efforts to the Commission prior to EDAM implementation and every six months thereafter until a long-term design is developed if that would be of value to the Commission.

The CAISO respectfully requests the Commission accept this tariff amendment effective as of the actual implementation date of EDAM (which is currently expected to be May 1, 2026). To permit this effective date, the CAISO requests that the Commission waive its notice requirement. The CAISO also requests the Commission issue an order on this filing by September 18, 2025, to provide certainty to the CAISO and its stakeholders on an issue of considerable interest and facilitate timely configuration and implementation of EDAM.

I. Executive Summary

This tariff amendment is an important, necessary, and incremental step in delivering the benefits of wholesale markets to customers in many states. Customers in the Western United States have benefited substantially through the extension of the Western Energy Imbalance Market (WEIM) to other parts of the

West.[2] EDAM builds upon the platform and successes of the WEIM. To date, the cumulative economic savings for WEIM participants have risen to $6.99 billion.[3] When accepting the tariff amendments to implement EDAM, the Commission recognized the anticipated benefits of extending the CAISO's day-ahead market to other balancing areas in the West.[4]

The CAISO proposes the instant tariff amendment to address questions and concerns raised by several stakeholders in ongoing Commission proceedings on OATT revisions filed by PacifiCorp and Portland General Electric Company (PGE) to allow their participation as EDAM entities and EDAM transmission service providers.[5] The questions and concerns were beyond the scope of those two proceedings and instead relate to the allocation of congestion revenues by the market operator under the Commission-approved EDAM provisions of the CAISO Tariff. Application of the approved methodology through the PacifiCorp and PGE proposed OATT changes focused in relevant part on the availability of financial congestion hedging tools for holders of firm transmission service rights in balancing areas participating in EDAM.[6] However, addressing these stakeholder questions and concerns depends upon the congestion revenue allocated to each EDAM balancing area through a cost allocation methodology established in the CAISO Tariff.[7] This tariff amendment will

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[2] The WEIM was formerly called the energy imbalance market (EIM). The term EIM is still used in WEIM-related provisions and defined terms in the CAISO Tariff, the CAISO business practice manuals (BPMs), and some other CAISO documents.

[3] https://www.caiso.com/about/news/news-releases/western-energy-imbalance-market-approaches-new-milestone.

[4] *See, e.g.*, *Cal. Indep. Sys. Operator Corp.*, 185 FERC ¶ 61,210 at P 42 (2023) (EDAM Acceptance Order) (finding "CAISO has demonstrated that its proposal presents a just and reasonable regional solution to expand the benefits of day-ahead market participation to existing WEIM [Western Energy Imbalance Market] participants and new entrants to both WEIM and EDAM"); *id.* (finding "EDAM has the potential to optimize the use of existing transmission and resources across a larger footprint in the West, which will provide economic and reliability benefits to participants"); *id.* ("Additionally, by leveraging a larger and more diverse set of resources across the Western Interconnection, we expect that DAME [the Extended Day-Ahead Market] and EDAM will help CAISO and other EDAM participants to manage the impacts of increasing variable energy resources and extreme weather events in the region.").

[5] The PacifiCorp OATT amendments are pending in Docket No. ER25-951. The PGE OATT amendments are pending in Docket No. ER25-1868.

[6] By balancing area, the CAISO means a balancing authority area (BAA) as defined in the North American Electric Reliability Corporation (NERC) Glossary of Terms Used in NERC Reliability Standards (NERC Glossary of Term), available at https://www.nerc.com/pa/Stand/Glossary%20of%20Terms/Glossary_of_Terms.pdf. The CAISO also uses the term balancing authority, consistent with the meaning in the NERC Glossary of Terms, when referring to the responsible entity that maintains balance within the balancing area.

[7] *See* revised CAISO Tariff appendix C as approved in the EDAM Acceptance Order (establishing the LMP as the total of the Marginal Energy Cost (MEC) component, plus Marginal

mitigate those concerns and facilitate participation in EDAM by providing transmission providers the ability to better manage their customers' congestion cost exposure. This will allow a broader group of interested participants and their customers to realize the benefits of day-ahead market participation.

Market participation in EDAM will be based on locational marginal prices (LMPs) for energy at nodes throughout the EDAM footprint. LMPs in nodal electricity markets differ by location due to transmission constraints that may arise on a transmission system. The revenue resulting from the difference between what a generator is paid and what a load is charged for the provision of electricity, based on their respective locations on the system and congestion due to transmission constraints, is called congestion revenue. In markets such as EDAM that span multiple balancing areas, parallel flow of electricity across the market area can mean a transmission constraint in one balancing area impacts the cost of congestion—and thus the LMP—in another balancing area.[8]

Under the current Commission-approved EDAM provisions of the CAISO Tariff, the CAISO would allocate all EDAM congestion revenue to the EDAM balancing area where the transmission constraint arose.[9] In addition, the tariff requires the EDAM entity for a participating balancing area to ensure that congestion revenue it receives from the CAISO is sub-allocated among transmission customers in that balancing area in accordance with the applicable OATT. No party requested rehearing of the EDAM Acceptance Order where the Commission accepted these congestion revenue allocation provisions. The CAISO believes this congestion revenue allocation methodology remains just and reasonable.

Over the past several months, however, many stakeholders raised questions and concerns about whether the approved EDAM design allocates sufficient congestion revenue to allow transmission providers participating in EDAM to provide reasonable hedges to customers exercising firm OATT rights against the costs of congestion resulting from parallel flow. In response, the CAISO committed to initiate the expedited stakeholder process that resulted in the targeted and transitional amendment to the CAISO Tariff proposed in this filing.

Cost of Congestion (MCC) component, plus Marginal Cost of Losses (MCL) component, and, if applicable, the Marginal Greenhouse Gas (MCG) component effective upon implementation of EDAM); *see also* CAISO Tariff sections 33.11.1.2 (day-ahead congestion revenue calculation effective upon implementation of EDAM) and 33.11.3.9.3 (day-ahead congestion offset settlement effective upon implementation of EDAM) as approved in the EDAM Acceptance Order; *compare* CAISO Tariff sections 11.5.4.1.1 (currently effective real-time congestion offset in the WEIM) and 11.5.4.1.2 (real-time congestion offset in the WEIM effective upon implementation of EDAM).

[8] Parallel flow is also known as "parallel path flow," "loop flow," or "unscheduled flow."

[9] *See* CAISO Tariff sections 33.11.1.2 and 33.11.3.9.3 as approved in the EDAM Acceptance Order.

This tariff amendment is targeted because it addresses those stakeholder questions and concerns in a manner requiring revisions to only one aspect of the approved methodology in a few sections of the CAISO Tariff, while leaving the rest of the tariff provisions approved in the EDAM Acceptance Order untouched. The tariff amendment is transitional because the CAISO and stakeholders agreed in the expedited stakeholder process that the CAISO will re-engage with stakeholders before the EDAM go-live date to explore potential additional near-term tariff enhancements, as discussed below, as well as to develop a long-term, durable design for allocating congestion revenue. The CAISO's long-term objective is to develop a market framework for congestion management that allows all market participants to reasonably hedge congestion costs, informed by market designs in other organized markets that include financial rights and flow entitlements. Gaining operational experience through this targeted transitional measure will help the CAISO and stakeholders see our way there.

In the instant filing, the CAISO proposes to allocate congestion revenue in EDAM using a more nuanced methodology that examines congestion revenue accrued from parallel flow associated with the exercise of eligible firm OATT transmission service rights.[10] Each element of the transitional approach used in the enhanced allocation methodology is just and reasonable. There are three categories of congestion revenue allocation broken down from the current approved methodology which has only a single category. Under this tariff enhancement, the first category involves allocating congestion revenue not associated with parallel flow (*i.e.*, internal congestion revenue arising from a binding transmission constraint within an EDAM balancing area). The CAISO will continue using the congestion revenue allocation methodology approved in the EDAM Acceptance Order. The third category applies to the allocation of congestion revenue associated with parallel flow but not associated with eligible firm OATT transmission service rights. The CAISO will also continue using the congestion revenue allocation methodology approved in the EDAM Acceptance Order. Therefore, categories one and three do not require any additional tariff revisions, justification, or new Commission authorization.

Only category two, which applies to the allocation of congestion revenue associated with both parallel flow and eligible firm OATT transmission service rights, requires the new, targeted tariff revisions, which the CAISO proposes in this filing.[11] The CAISO proposes to allocate the portion of congestion revenue in

[10] Specifically, the CAISO proposes to specify in new tariff section 33.11.1.2.1 that eligible rights are long-term firm and monthly firm point-to-point and network integration transmission service rights, including conditional firm, as defined under the EDAM transmission service provider tariff (with shorter-term rights being ineligible for this treatment).

[11] The key distinction between the second category and the third category is whether the parallel flow was created from use of long-term and monthly firm, including conditional firm, OATT rights as opposed to all other forms of market participation.

category two to the EDAM balancing area where the congestion revenue accrued—not to the balancing area where the transmission constraint arose, as under the existing methodology. This allocation will include the day-ahead congestion revenue associated with both (1) parallel flow of electricity within the EDAM area, and (2) balanced day-ahead self-schedules for eligible firm OATT transmission service rights under the OATT of an EDAM entity.

These targeted tariff revisions support the guiding objectives identified in the expedited stakeholder process for the design of an enhanced EDAM congestion revenue allocation methodology for three reasons. First, the modified approach will allow better management of the congestion cost exposure for transmission customers exercising their eligible firm OATT transmission service rights. Second, it will minimize congestion cost shifts between EDAM balancing areas and support EDAM entity mechanisms for sub-allocating congestion revenues. It is appropriate to mitigate the abrupt cost shift from the historical practice whereby transmission customers in neighboring balancing areas have not borne the costs of any congestion their schedules cause in other balancing areas. The approved EDAM design changed this longstanding paradigm because the costs associated with congestion in neighboring balancing areas caused by constraints in the other participating balancing area now would be allocated to that balancing area. The proposed modified methodology will mitigate this impact for a transitional period and thus allow for a smooth transition to EDAM. Finally, moving forward with this transitional approach will facilitate timely implementation of EDAM.

Most stakeholders submitting comments in the expedited stakeholder initiative broadly supported, or do not oppose, using the transitional congestion revenue allocation methodology at the start of EDAM implementation. They recognize this proposed approach is responsive to the concerns raised in the PacifiCorp and PGE OATT proceedings and is an enhancement to the existing EDAM congestion revenue allocation methodology that will provide additional tools for firm OATT customers to hedge day-ahead congestion costs associated with parallel flow.[12]

Some stakeholders oppose the proposal for two primary reasons: (1) preference for a holistic, long-term design over interim measures; or (2) concern the proposal could apply to OATT transmission rights established after EDAM

[12] Powerex Corp (Powerex), an active participant in the PacifiCorp and PGE proceedings, stated in written comments in the expedited stakeholder process that the proposal "appears to provide a sufficient congestion revenue allocation to EDAM Entities to enable them to provide a proper source-to-sink congestion hedge for registered monthly or longer firm OATT transmission rights that are self-scheduled in the day-ahead market." Stakeholder comments on the Draft Final Proposal are available at https://stakeholdercenter.caiso.com/Comments/AllComments/98b9032c-abc1-48ff-ab7c-a0c4a879eff7#org-807854df-438d-4e42-92ed-d7821d9f1d97.

launch. Although the CAISO understands the appeal of focusing on a long-term solution, ignoring the current stakeholder concerns that have been expressed and choosing not to adopt transitional improvements would leave many stakeholders with outstanding concerns regarding their exposure to congestion costs resulting from parallel flows. The enhancement proposed in this filing will address those concerns and provide additional tools for congestion hedging, facilitating expanded participation in EDAM. Implementing this enhancement will not prevent or hinder the CAISO from turning its focus to evolving the design, including within the first year of EDAM operations, informed by operational experience, analysis, and stakeholder input.

Throughout the expedited stakeholder initiative, the CAISO sought to be responsive to concerns raised by stakeholders about the different iterations of the proposal. One such concern was that the proposed design may incentivize broad self-scheduling of generation across the EDAM footprint, thereby reducing market efficiency. As discussed below, the CAISO concluded the potential impacts of such an incentive are not expected to be widespread in the near term and, with continued evaluation, the magnitude of potential impacts can be better understood and the need for any additional mitigation strategies considered. Nevertheless, the CAISO is committed to rigorously evaluating information available prior to implementation, assessing the potential magnitude of the self-scheduling concern, and monitoring the effects of the design on the frequency of self-scheduling of generation.

The Department of Market Monitoring (DMM) believes the revised methodology is a reasonable alternative transitional measure and supports moving forward because the benefits of EDAM relative to the pre-EDAM market outweigh what the DMM views as its imperfections. The Western Energy Markets (WEM) Governing Body market expert supports the proposal because it will enable timely implementation of EDAM, provide an opportunity to gather operational information that will inform further enhancements, and enable the realization of substantial economic and reliability benefits for customers. The Market Surveillance Committee (MSC) believes the CAISO should analyze available information and prepare to mitigate potential adverse outcomes from this modification prior to EDAM implementation. The CAISO takes this expert advice to heart and appreciates the desire to move forward with EDAM implementation on time and begin realizing the widely recognized benefits of EDAM.

Specifically, the MSC recommends data gathering and conducting analysis prior to implementation to increase confidence that negative consequences would not be substantial, and cautioned the CAISO in any event

to prepare for potential adverse outcomes in advance of implementation.[13] Although the MSC recognizes the approach is a compromise and does not oppose moving forward, the MSC also expresses a preference to proceed under the current approved methodology coupled with negotiated flow entitlements over a set of transmission constraints that are anticipated to be most impacted by parallel flows. Further, the MSC emphasizes development of a long-term design as the overarching objective and cautions against spending time enhancing the current proposal through the additional near-term enhancement described and considered in the final proposal presented in the stakeholder process.

Given the significant stakeholder questions and concerns regarding congestion revenue allocation and hedging issues raised in the past six months, the CAISO believes the proposed enhancement is a necessary and appropriate transitional measure to alleviate concerns and promote greater EDAM participation. The CAISO's proposed congestion revenue allocation enhancement will provide significant benefits in terms of promoting broader EDAM participation without the level of reservation and concern that stakeholders have raised. The CAISO views this as a significant net positive for customers in the West. That said, the CAISO takes the recommendations of the MSC seriously and commits to gather the requested information and report its findings through the implementation processes, upcoming stakeholder engagement working groups, and after EDAM implementation. Using this data, the CAISO can consider any measures that may be necessary to mitigate adverse outcomes prior to implementation, potential future enhancements, and a longer-term, durable congestion revenue allocation framework. The Commission can and should recognize the CAISO's proposed enhancement will facilitate customer benefits and is a just and reasonable transitional update to the EDAM design.

Many stakeholders supporting the enhancement underscored that the proposed approach is intended to be an interim (*i.e.*, transitional) solution, and expect the CAISO and stakeholders will continue to collaborate on near-term and long-term enhancements. To that end, the CAISO commits to re-engage with stakeholders in working groups later in 2025, continue the engagement through EDAM go-live in 2026 as information becomes available from market simulation

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[13] The MSC made this recommendation in its opinion (MSC Opinion) available at https://www.caiso.com/documents/market-surveillance-committee-final-opinion-extended-day-ahead-market-congestion-revenue-allocation-jun-16-2025.pdf. The WEM Governing Body market expert shares the concern and caution described by the MSC and ultimately supports the proposal to "enable the California ISO and Western Energy Market (WEM) to move forward with the introduction of EDAM. Operation of EDAM is anticipated to enable substantial cost savings and increases in reliability on behalf of customers of EDAM entities. A second benefit of start-up will be the provision of data and experience to assess the performance of EDAM and identify areas for improvement." WEM Governing Body Market Expert Opinion at 2 (June 16, 2025), available at WEM-Governing-Body-Market-Expert-Opinon-on-Extended-Day-Ahead-Market-Congestion-Revenue-Allocation-Jun-18-2025.pdf.

and parallel operations, and do the same thereafter as operational information becomes available. This engagement will consider both near-term and long-term EDAM design enhancements. The near-term discussions will focus on: (1) incentives to self-schedule identifying potential enhancements which incent economic bidding and mitigate or eliminate self-scheduling incentives; and (2) developing a treatment for congestion revenue allocation within the CAISO balancing area that is comparable to the treatment afforded to OATT transmission service rights in other EDAM balancing areas. The CAISO aims to implement a near-term enhancement in 2027, assuming an enhancement to the methodology meeting these needs is developed through the stakeholder process and approved.

The CAISO also recognizes the MSC's concern that merely extending this interim design to include economically bid-in amounts does not address all the potential adverse impacts they raise and raises others as well. The CAISO will work through the stakeholder process to consider those concerns as it develops future enhancements and works toward a long-term design. The long-term design discussion will take a more comprehensive look at both a durable method for allocating congestion revenue and market mechanisms that allow market participants to hedge congestion costs, informed by actual operational experience with EDAM.

During these discussions, the CAISO will engage regularly with the MSC and stakeholders to obtain design input. The CAISO's plan is to present any final long-term proposal for CAISO Governing Board and WEM Governing Body approval within 12 to 24 months after EDAM go-live, pursuant to the applicable governance at that time. The CAISO aims to implement any approved long-term enhancements in 2028 or 2029 depending on the approach and associated implementation considerations.

In addition, the CAISO commits to monitor the performance and impacts of the transitional tariff revisions proposed in this filing as soon as the end of market simulation, during parallel operations, and after EDAM goes live. The CAISO will monitor congestion-related metrics and share the operational information it gleans through that monitoring with market participants in regular forums. The DMM will independently perform monitoring and reporting as well. The operational information provided by the CAISO and the DMM will help inform future evolution of the design of EDAM congestion revenue allocation. Finally, the CAISO commits to regularly reporting information to all stakeholders through its normal course of business. If the Commission finds this sort of information beneficial, the CAISO encourages the Commission to direct submission of an informational report prior to EDAM implementation and every six months thereafter until a long-term design is developed.

The CAISO emphasizes the enhancement proposed in this filing is presented to the Commission apart from the planned near-term and long-term enhancements. For all the reasons explained below, the Commission should find the CAISO Tariff revisions contained in this filing are just and reasonable. Therefore, the Commission should accept the proposed tariff revisions.

II. Background

A. Components of the Market Design Relevant to this Tariff Amendment Filing

1. Overview of the Market Design

The CAISO is the transmission provider for transmission facilities placed under its operational control within its balancing area. The CAISO also administers day-ahead and real-time wholesale electricity markets.[14]

The CAISO offers a single category of transmission service under its tariff on the facilities placed under its operational control—called new firm use[15]—that is not associated with existing rights, such as existing transmission contracts (ETCs)[16] and transmission ownership rights (TORs),[17] that receive a transmission service priority. The Commission found this CAISO transmission

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[14] The day-ahead market consists of the market power mitigation process, the integrated forward market (IFM), and the residual unit commitment process. CAISO Tariff section 31. The real-time market consists of the hour-ahead scheduling process, the real-time unit commitment process, the short-term unit commitment process, the fifteen-minute market, and the real-time dispatch process. CAISO Tariff section 34. Citations in this filing to the CAISO Tariff are citations to the currently effective tariff except where otherwise stated.

The CAISO is identified as the market operator in materials it posted in the stakeholder proceeding that ultimately resulted in this tariff amendment filing. The CAISO is also the market operator (or MO for short) under the OATTs of various public utilities in the Western Interconnection. *See, e.g.*, *PacifiCorp*, 147 FERC ¶ 61,227, at P 14 n.18 (2014) ("Likewise, we will refer to CAISO instead of the 'Market Operator,' defined in proposed section 1.19B of PacifiCorp's OATT as '[t]he entity responsible for operation, administration, settlement, and oversight of the EIM,' as CAISO is currently performing these functions.").

[15] *See* CAISO Tariff section 23.1.

[16] As used in the CAISO Tariff, an ETC (sometimes also called an existing contract) means a contract which grants transmission service rights in existence on the CAISO operations date (March 31, 1998), including any contracts executed pursuant to such contracts. CAISO Tariff appendix A, definitions of Existing Transmission Contracts or Existing Contracts and of CAISO Operations Date. *See also* CAISO Tariff section 16 (addressing treatment of ETCs).

[17] As used in the CAISO Tariff, a TOR means the ownership or joint ownership right to transmission facilities within the CAISO balancing area of a non-participating transmission owner that has not executed the Transmission Control Agreement, which transmission facilities are not incorporated into the CAISO controlled grid. CAISO Tariff appendix A, definition of Transmission Ownership Right. *See also* CAISO Tariff section 17 (addressing treatment of TORs).

service model is just and reasonable, complies with Commission Order No. 890, and is consistent with or superior to the Commission's *pro forma* OATT.[18] The CAISO model differs from the transmission service model used by other public utilities in the Western Interconnection. Following the physical rights transmission service model embodied in the *pro forma* OATT,[19] those other public utilities provide firm and non-firm point-to-point and network transmission service of various durations (*e.g.*, long-term and monthly) under their respective Commission-approved OATTs.[20]

The CAISO's day-ahead and real-time markets both operate inside the CAISO balancing area, while the WEIM provides other participating balancing areas in the Western Interconnection an opportunity to participate in the CAISO's real-time market.[21] The EDAM design, which the Commission approved in the EDAM Acceptance Order, will similarly provide other balancing areas in the Western Interconnection that participate in the WEIM an opportunity to participate in the day-ahead market.[22] The CAISO currently expects to implement EDAM on May 1, 2026.

In the CAISO markets, scheduling coordinators can submit economic bids and self-schedules (*i.e.*, price-taker bids) for energy and ancillary services.[23] A balanced self-schedule submitted by a scheduling coordinator represents the same MWh quantity at the source location and the sink location on the

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[18] *See Cal. Indep. Sys. Operator Corp.*, 123 FERC ¶ 61,180 (2008), *order on further compliance*, 126 FERC ¶ 61,316 (2009) (finding CAISO transmission service model complies with *Preventing Undue Discrimination and Preference in Transmission Service*, Order No. 890, 118 FERC ¶ 61,119, *order on reh'g*, Order No. 890-A, 121 FERC ¶ 61,297 (2007), *order on reh'g*, Order No. 890-B, 123 FERC ¶ 61,299 (2008)).

[19] *See Cal. Indep. Sys. Operator Corp.*, 123 FERC ¶ 61,180, at P 7.

[20] Specifically, part II of the Commission's *pro forma* OATT pertains to point-to-point transmission service in conjunction with the applicable common service provisions of part I and appropriate schedules and attachments. Part III of the *pro forma* OATT pertains to network transmission service (also called network integration transmission service or NITS) in conjunction with the applicable common service provisions of part I and appropriate schedules and attachments. *See* Commission *pro forma* OATT sections 1.31 – 1.33. The public utility OATTs described above generally follow this same organizational structure.

[21] The CAISO implemented the WEIM in 2014. *See Cal. Indep. Sys. Operator Corp.*, 147 FERC ¶ 61,231, *order on reh'g, clarification, & compliance*, 149 FERC ¶ 61,058 (2014). The WEIM is generally addressed in CAISO Tariff section 29 *et seq.*

[22] EDAM is generally addressed in CAISO Tariff section 33 *et seq.* The CAISO discusses the Commission's approval of the CAISO Tariff provisions implementing the EDAM design below in section II.B.3.

[23] CAISO Tariff section 30 *et seq.* A self-schedule is a market bid a scheduling coordinator submits to the CAISO that indicates a quantity in megawatt-hours (MWh) but does not specify a price. This indicates the scheduling coordinator is a price-taker. CAISO Tariff appendix A, definition of Self-Schedule. Effectively, self-schedules are requests that the market schedule the transaction irrespective of the market price.

transmission system. The EDAM provisions of the CAISO Tariff will require exports and wheeling through transactions to be self-scheduled.

Supply bid into the integrated forward market (IFM), which is a process in the day-ahead market, clears against bid-in load and ancillary service requirements. The IFM co-optimizes procurement of energy and ancillary services for each operating hour of the trading day seeking to minimize overall procurement costs, while respecting transmission constraints and inter-temporal resource constraints such as minimum run time and start-up time.[24]

The CAISO issues schedules for energy and ancillary services in the IFM using a clean bid set, which consists of bids mitigated through the market power mitigation process and the submitted bids that were not flagged for mitigation. The market optimization software schedules and prices resources in two successive runs. First, the scheduling run produces resource schedules. This involves clearing bids, enforcing the priorities of self-schedules, and potentially relaxing constraints.[25] Second, the pricing run follows the scheduling run and produces the LMPs utilized in the CAISO's financial settlements process.[26] The CAISO settles day-ahead market transactions for each hourly settlement period of the trading day.[27]

The day-ahead market and real-time market, and by extension EDAM and the WEIM (the former starting in May 2026), utilize the CAISO's full network model (FNM) to enforce all appropriate network and resource constraints to optimally commit and dispatch resources to meet demand across the market area. The FNM provides the necessary information to determine and mitigate transmission congestion and to calculate the relevant LMP at each nodal pricing

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[24] *See generally* CAISO Tariff Section 31.3 *et seq.* As used in the CAISO Tariff, a transmission constraint means a physical or operational limitation on the transfer of electric power through transmission facilities. CAISO Tariff appendix A, definition of Transmission Constraints.

[25] CAISO Tariff section 31.4 specifies the scheduling priorities in the day-ahead market.

[26] CAISO Tariff section 31.3. As used in the CAISO Tariff, an LMP means the marginal cost (in dollars per MWh) of serving the next increment of demand at a pricing node consistent with existing transmission constraints and the performance characteristics of resources. CAISO Tariff appendix A, definition of Locational Marginal Price.

[27] CAISO Tariff section 11.2 *et seq.* As used in the CAISO Tariff, a settlement period means the period beginning at the start of the hour and ending at the end of the hour. There are twenty-four settlement periods in each trading day (except for trading days in which there is a change to or from daylight savings time). CAISO Tariff appendix A, definition of Settlement Period. For any given day-ahead market, the trading day will be the next operating day following the operating day during which that day-ahead market is executed. CAISO Tariff appendix A, definition of Trading Day.

location (or aggregated pricing location) within the FNM that is attributable to the location of the source of the binding constraint.[28]

For the day-ahead market, the LMP at each location equals the sum of a marginal energy cost (MEC) component,[29] a marginal cost of losses (MLC) component, and a marginal cost of congestion (MCC) component of the LMP calculation.[30] The MEC represents the system-wide energy clearing price, the MLC represents the cost associated with transmission line losses, and the MCC represents the cost of congestion at a given location (*e.g.*, a node on the transmission system) when transmission elements are congested—*i.e.*, constrained.[31]

2. Treatment of Congestion

Congestion is a characteristic of the transmission system produced by a binding transmission constraint.[32] Congestion impacts the optimum economic dispatch to meet demand such that the LMP (exclusive of the MLC) at different locations of the transmission system is not equal.[33] Thus, the LMPs vary by location across the transmission system—at generation pricing and load pricing locations—driven in large part by the MCC component based on the congestion across the market footprint as represented by transmission constraints that may be binding in the market. In effect, the congestion price at a given pricing

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[28] *See* CAISO Tariff section 27.5 *et seq.* As used in the CAISO Tariff, the FNM means a computer-based model that includes all CAISO balancing area transmission network (load and generating unit) busses, transmission constraints, and intertie busses between the CAISO balancing area and interconnected balancing areas. The FNM models the transmission facilities internal to the CAISO balancing area as elements of a looped network and models the CAISO balancing area interties with interconnected balancing areas in a radial fashion as specified in the Tariff. CAISO Tariff appendix A, definition of Full Network Model.

[29] The EDAM design includes a MEC for each participating balancing area, which is the same as the system marginal energy cost (SMEC) component of the LMP calculation for the CAISO balancing area under the current (*i.e.*, pre-EDAM) CAISO Tariff. *See* EDAM Acceptance Order at PP 394-96, 401. For the real-time market only, the EDAM design also includes another component of the LMP calculation—a marginal greenhouse gas (GHG) cost component applicable to each GHG regulation area. *See id.* at PP 366-70, 387.

[30] *See generally* CAISO Tariff section 27.1 *et seq.* and CAISO Tariff appendix C.

[31] *See* CAISO Tariff appendix A, definitions of System Marginal Energy Cost, Marginal Cost of Losses, and Marginal Cost of Congestion; *see also* CAISO Tariff appendix C (providing the formulation of the LMP).

[32] Congestion revenue in EDAM will be separate from transfer revenue, which results when a scheduling limit between balancing areas binds. Transfer revenue considerations were resolved in the EDAM Acceptance Order and further changes are not necessary or considered in this filing.

[33] CAISO Tariff appendix A, definition of Congestion.

location represents the total impact of congestion from the various transmission constraints at that location.

There are many pricing locations within a balancing area that represent generation and load, with each pricing location having its applicable LMP that includes an MCC component. Each of these locations can have a different LMP, even within a single balancing area, driven by the extent of congestion experienced on binding constraints on the transmission system.[34] Congestion revenue accrues when energy transactions are settled based on the LMPs and price differences exist due to congestion (reflected in the MCC) between locations such as generation and load locations.

Figure 1 below provides a hypothetical example to illustrate the concept of a difference in LMPs driven by transmission constraints between two pricing locations, a generator location and a load location. As depicted in Figure 1, the difference in the resulting LMPs ($40/MWh at the load location minus $25/MWh at the generator location) represents $15/MWh in congestion revenue, which the CAISO will allocate among EDAM balancing areas using the methodology discussed below.

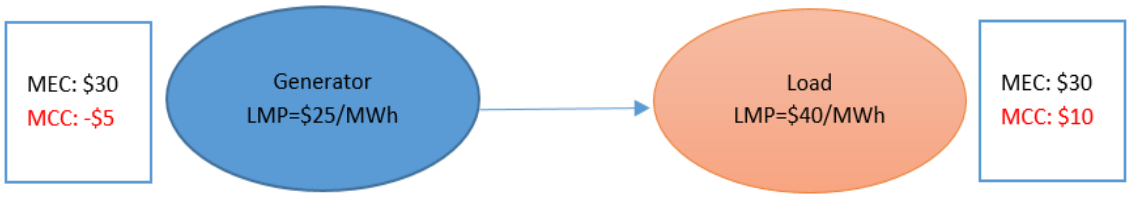

Figure 1: Congestion revenue accrual due to congestion on a system

The CAISO's market optimization software treats all demand and supply across the market footprint as part of a single integrated market. Consequently, after EDAM is implemented, a transmission constraint in one EDAM balancing area can influence the MCC of the LMP at pricing locations in neighboring EDAM balancing areas. This influence on the MCC reflects the transmission constraint's contribution to congestion and is based on flow contributions from schedules at that location in relation to the transmission constraint. Moreover, in the integrated market it is common for multiple transmission constraints across a larger and interconnected market footprint to bind simultaneously, thereby causing the MCC at a particular pricing location to reflect the congestion cost associated with those multiple transmission constraints based on flow contributions to each of those transmission constraints. As a result, the MCC

[34] The MLC (associated with transmission losses) can also be a driving factor for price differences in the LMP, but the MCC is generally the most variable and fluctuating element of the LMP based on the congestion conditions on the system.

can be broken down or "decomposed" into components reflecting the various simultaneously binding constraints based on the balancing area in which each transmission constraint arose. The CAISO has used this decomposition approach in the WEIM since its implementation in 2014 to enable the CAISO to determine in which balancing area the congestion revenue is to be allocated.

a. The Approved Methodology for Allocating Congestion Revenue, Including Congestion Revenue for Parallel Flow

Due to parallel flow, the generation in one balancing area can contribute to congestion in a neighboring balancing area, and this contribution may be reflected in the MCC at generation and load pricing locations across different balancing areas. Parallel flow (sometimes called parallel path flow, loop flow, or unscheduled flow) means the flow of electricity along the natural paths of least resistance on the interconnected transmission system and across such different balancing areas. Parallel flow is a physical phenomenon universally known in the electric industry to be inherent in moving electricity on a network of interconnected transmission lines.[35]

Parallel flow exists today across all interconnected transmission systems and has created or contributed to operational challenges across the Western Interconnection.[36] Managing congestion caused by a transmission constraint is the responsibility of the balancing area where it occurs. Figure 2 below provides a hypothetical example to illustrate the effects of parallel flow between neighboring balancing areas. In Figure 2, a transmission constraint (constraint X) arises in BAA-A. In addition, power flow analysis determines that energy schedules along path C-D will flow between BAA-A and BAA-B across path A-C or path B-D generating parallel flow across interconnected balancing areas on constraint X. As a result, energy schedules along path C-D within BAA-B will generate congestion revenue associated with constraint X. In the organized market context, for example, the LMPs at locations C and D in BAA-B may reflect a congestion price difference in their respective MCCs that includes the parallel flow contributions to constraint X in BAA-A.

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[35] *See, e.g.*, *Pub. Serv. Co. of Ind., Inc.*, 51 FERC ¶ 61,357, at 62,211 (1990) ("First, as we have noted in previous decisions, parallel path or loop flows are a physical phenomena inherent to the operation of an interconnected grid. Such flows arise because electric power flows according to the laws of physics and not the law of contracts.") (internal citation omitted).

[36] Transmission providers and grid operators deploy different strategies for managing and mitigating the effects of parallel flow. They may deploy these strategies through their available transfer capability (ATC) methodologies that seek to account for uncertainty associated with parallel flow, through different scheduling procedures that may seek to reduce transmission schedules contributing to parallel flow at specific system locations, or through other approaches including closer study and coordination between neighboring balancing areas.

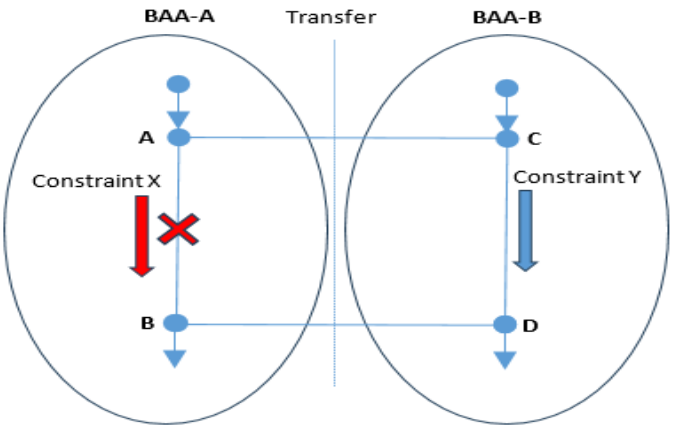

Figure 2: Parallel flow effects illustration between neighboring balancing areas.

Under the WEIM design, congestion revenue is allocated in all cases to the balancing area where the transmission constraint arose.[37] Therefore, in the example in Figure 2, accrued congestion revenue in the WEIM that is associated with energy schedules between pricing locations C and D within BAA-B result in parallel flow congestion revenue in relation to constraint X, which will be solely allocated to BAA-A in relation to the path C-D energy schedule contribution (power transfer distribution factor) on constraint X modeling within BAA-A. The sum of the congestion revenue contribution to constraints modelled within BAA-A is distributed to BAA-A through the relevant real time congestion offset charge code. The methodology for allocating congestion revenue under the existing Commission-accepted EDAM design is the same methodology used today in the WEIM, and the WEIM methodology will not change as a result of this amendment.[38]

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[37] *See* CAISO Tariff section 11.5.4.1.1; BPM for the EIM at section 11.3.3.4.1, available at https://bpmcm.caiso.com/Pages/BPMDetails.aspx?BPM=Energy%20Imbalance%20Market. Under the WEIM design, the CAISO uses a single settlement and allocation methodology for both congestion revenue and transfer revenue (*i.e.*, revenue generated from congestion management of transmission scheduled or released to the market between balancing areas).

[38] *Compare* CAISO Tariff section 11.5.4.1.1 (currently effective real-time congestion offset in the WEIM) *with* CAISO Tariff section 11.5.4.1.2 (real-time congestion offset in the WEIM effective upon implementation of EDAM). In the WEIM, the CAISO settlement system calculates a real time congestion offset amount for each BAA as the sum of the product all imbalance energy quantities (FMM Instructed Imbalance Energy, RTD Instructed Imbalance Energy, Unaccounted for energy, and Uninstructed Imbalance Energy) at each nodal location across the WEIM area and the relevant nodal real-time market marginal cost of congestion sub-component, MCC Breakdown, price, plus congestion contributions from convergence (virtual) bid FMM reversal settlement at the FMM MCC Breakdown price. Based upon the example in Figure 2 above, if a generator is dispatched 100 MWs at node C at an LMP of $45 with an MCC of $2 to serve demand in the WEIM area at node D at an LMP of $50 with a MCC of $7, the congestion revenue collected from this transaction is $500. Because all of the $500 is associated with

b. Congestion Revenue Rights

The market design within the CAISO balancing area includes congestion revenue rights (CRRs), which are financial instruments that market participants can acquire through a CAISO-administered allocation and auction process or through a secondary registration system.[39] CRRs are defined by their: (a) paired source and sink points on the transmission system; (b) designated megawatt (MW) quantity; and (c) term (*e.g.*, a season or a month).[40] As part of the financial settlement of CRRs, the CAISO calculates an hourly CRR congestion fund for every transmission constraint that is congested in the IFM in a settlement period and settles CRRs based on the money available in the congestion funds that correspond to the constraints over which each CRR has modeled flow.[41] CRRs are available on transmission facilities placed under the CAISO's operational control. However, balancing areas participating in EDAM do not place

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constraint X binding, the $500 congestion revenue contribution from the 100 MW dispatch is included in the real time congestion offset charge code for BAA-A. Assuming there are no additional real time congestion contributions, BAA-A would receive a payment of $500 for the congestion collected associated with energy scheduled/dispatched between the resource at pricing location C and demand at pricing location D.

[39] *See generally* CAISO Tariff section 36 *et seq.*; *see also* http://www.caiso.com/market/Pages/ProductsServices/CongestionRevenueRights/Default.aspx. In order to hold CRRs, an entity must be a candidate CRR holder, which means the entity is registered and qualified by the CAISO to participate in the CRR allocation, the CRR auction, or the secondary registration system to become a CRR holder and is a party to a fully executed CRR Entity Agreement, and therefore must comply with the requirements for candidate CRR holders under the CAISO Tariff. *See* CAISO Tariff Appendix A, definition of Candidate CRR Holder.

[40] *See* CAISO Tariff sections 36.2 *et seq.* and 36.3 *et seq.*; *Cal. Indep. Sys. Operator Corp.*, 163 FERC ¶ 61,237, at P 34 n.66 (2018); *Cal. Indep. Sys. Operator Corp.*, 136 FERC ¶ 61,120, at P 2 (2011). There are two types of CRRs—CRR obligations and CRR options—and they are designated either for on-peak or off-peak hours. *See* CAISO Tariff sections 36.2 and 36.3.3.

[41] Under the CAISO Tariff, the hourly CRR congestion fund means the pool of funds the CAISO collects and holds pursuant to the tariff, corresponding to a specific transmission constraint and settlement period, that the CAISO has available to pay CRR holders for the portion of their CRRs modeled as having a power transfer distribution factor (PTDF) on that transmission constraint. CAISO Tariff appendix A, definition of Hourly CRR Congestion Fund. A PTDF, in turn, means the percentage of a power transfer that flows on a transmission facility as a result of the injection of power at a specific bus and the withdrawal of power at another bus or a reference bus. CAISO Tariff appendix A, definition of Power Transfer Distribution Factor.

The hourly CRR congestion fund specific to a particular binding transmission constraint in a given settlement period is the sum of the: (a) portion of the IFM congestion fund in that settlement period attributable to congestion on the transmission constraint to which the congestion fund corresponds; (b) charges specific to the transmission constraint calculated pursuant to the tariff; and (c) CRR credit adjustments the CAISO may make pursuant to the tariff that are associated with the transmission constraint. CAISO Tariff section 11.2.4.1.2.

transmission facilities under the CAISO's operational control. Thus, CRRs are not available under the approved EDAM provisions of the CAISO Tariff.[42]

The primary purpose of CRRs is to hedge congestion costs in the day-ahead market, allowing market participants to address day-ahead congestion risk. When transmission demand exceeds capacity, LMPs vary depending on congestion levels. Congestion charges can change based on system conditions and patterns of supply and demand. As the Commission has recognized, CRRs give market participants a level of financial protection against the risks associated with unpredictable congestion charges in the day-ahead market.[43]

3. Allocation of Congestion Revenue Under the EDAM Design Approved by the Commission

a. The August 2023 Filing

On August 22, 2023, the CAISO filed amendments to the CAISO Tariff to implement the EDAM design.[44] The amendments establish a tariff framework to allow balancing authority participants in the existing WEIM to choose voluntarily to join and participate in EDAM.

The CAISO explained that it proposed to calculate congestion costs for EDAM using the same approach approved for the WEIM, including the allocation of congestion revenue associated with flows on transmission constraints based on the balancing area where the transmission constraint arose.[45] The difference

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[42] *See* transmittal letter for CAISO Tariff amendments to implement EDAM design, Docket No. ER23-2686-000, at 194, 196-97 (Aug. 22, 2023) (August 2023 Filing); EDAM Acceptance Order at P 19.

[43] *See, e.g.*, *Cal. Indep. Sys. Operator Corp.*, 149 FERC ¶ 61,093, at P 2 (2014) ("CRRs are financial instruments that enable their holders to hedge variability in congestion costs. Entities acquire CRRs primarily to offset integrated forward market congestion costs reflected in the congestion component of locational marginal prices (LMPs)." (citations omitted).

[44] That August 2023 Filing, which the CAISO submitted in Docket No. ER23-2686, also included revisions to the CAISO Tariff to implement the CAISO's Day-Ahead Market Enhancements (DAME).

[45] The CAISO explained in the August 2023 Filing that only "the balanced portion of a legacy contract or ownership right schedule associated with a contract reference number" would receive "financial protection from congestion charges and losses, sometimes called the 'perfect hedge,' to the extent the underlying contract rights support such financial protections." Transmittal letter for August 2023 Filing at 126; *id.*, attachment B-2, at CAISO Tariff sections 33.16 (establishing the requirements and procedures that honor EDAM legacy contracts) and 33.17 (establishing the requirements and procedures that honor EDAM TORs). *See also id.*, transmittal letter at 190 ("The CAISO will adjust congestion revenue within an EDAM balancing area for legacy contract and ownership rights that receive a hedge against congestion and will settle with the scheduling coordinator for the balancing authority."). The CAISO also stated that "[u]nlike individual customer legacy contracts or ownership rights, balanced intra-day self-

between the WEIM and EDAM is that the CAISO uses a single settlement and allocation methodology for congestion revenue in the WEIM, but for EDAM the CAISO will settle *intra*-balancing area *congestion* revenue (by allocating it to the balancing area where the internal transmission constraint materializes for any reason) separately from *inter*-balancing area *transfer* revenue (by evenly splitting the transfer revenues between the two balancing areas involved in the transfer).[46]

Each EDAM entity must in turn ensure that congestion revenue it is allocated is further allocated (*i.e.*, sub-allocated) by all applicable EDAM transmission service providers as may be detailed in the EDAM transmission service provider's tariff and business practices. Congestion revenue allocated to the CAISO balancing area will be further allocated according to the CAISO Tariff.[47]

In addition, the CAISO proposed several tariff revisions to allow customers with transmission service rights under tariffs based on the Commission's *pro forma* OATT to elect how to exercise those rights in EDAM. As a first step toward exercising those rights, the CAISO proposed to require registration with the CAISO of all firm and conditional firm transmission service rights within a balancing area. Under the registration process, the CAISO would assign each registered transmission customer right a contract reference number for

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schedules using specific firm OATT transmission rights will not receive a perfect hedge and such schedules will be responsible for congestion or redispatch costs." *Id.*, transmittal letter at 130. The CAISO similarly noted that "using physical transmission rights to hedge the cost of congestion does not insulate transmission customers from all congestion costs." *Id.*, transmittal letter at 197.

[46] *See* transmittal letter for August 2023 Filing at 185-92; *id.*, attachment B-2 (red-lined CAISO Tariff revisions), at revised CAISO Tariff section 11.5.4 *et seq.* and new CAISO Tariff sections 33.11 and 33.11.1 *et seq*. *See also* Motion for Leave to Answer and Answer of the California Independent System Operator Corporation to Comments and Limited Protests, Docket No. ER23-2686-000, at 143-49 (Oct. 11, 2023).

[47] *See* transmittal letter for August 2023 Filing at 190; *id.*, attachment B-2, at new CAISO Tariff section 33.11.1.2. Under the EDAM provisions of the CAISO Tariff, an EDAM entity means a balancing authority that has entered into a specified agreement with the CAISO to enable the operation of the day-ahead market in addition to the real-time market in the EDAM entity's balancing area. The CAISO is not an EDAM entity. *Id.*, attachment B-2, at CAISO Tariff appendix A (new definition of EDAM Entity). Under the EDAM Tariff provisions, an EDAM transmission service provider means an EDAM entity or other party that owns transmission or has transmission service rights on an EDAM intertie or within an EDAM entity balancing area, that provides transmission service, and that makes transmission service available for use in the day-ahead market through the EDAM entity. This definition does not include NITS customers or other transmission customers of an EDAM transmission service provider, EDAM legacy contract rights, or EDAM TORs (as those terms are defined under the EDAM Tariff provisions). *Id.*, attachment B-2, at CAISO Tariff appendix A (new definition of EDAM Transmission Service Provider).

schedules that indicate the customer's use of the associated transmission capability in the day-ahead market.[48]

b. The EDAM Acceptance Order

On December 20, 2023, the Commission approved almost all of the August 2023 Filing in the EDAM Acceptance Order, including the bulk of the CAISO Tariff revisions to implement the EDAM design.[49] The tariff revisions regarding EDAM onboarding and implementation activities have already gone into effect.[50] The Commission accepted the balance of the EDAM tariff revisions effective as of the date EDAM goes live,[51] planned for May 1, 2026.

In particular, the Commission "accept[ed] CAISO's proposal to settle *intra*-BAA congestion revenue separately from *inter*-BAA transfer revenue because it enables allocation of transfer revenue rights to the holders that voluntarily made transmission available to the day-ahead market."[52] The Commission found "[c]ongestion revenue represents the cost to serve demand across just the internal BAA transmission system while inter-BAA transfer revenue represents the cost of serving demand across BAAs; it is thus necessary to keep those revenue streams separated."[53] The Commission "agree[d] that CAISO's proposal to allocate congestion revenue to the BAA where the internal transmission constraint arises is reasonable."[54]

The Commission also recognized the "CAISO proposes to appropriately assign congestion revenues entirely within the BAA where the constraint is

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[48] *Id.*, transmittal letter at 127; *id.*, attachment B-2, at new CAISO Tariff sections 33.18 – 33.18.3 *et seq.*

[49] The only revisions to the CAISO Tariff the Commission did not initially accept in the EDAM Acceptance Order were those regarding the proposed EDAM access charge, which the Commission rejected without prejudice, allowing the CAISO to submit additional support for its access charge proposal. *See* EDAM Acceptance Order at PP 460-65. The CAISO subsequently filed and the Commission accepted an amendment to the CAISO Tariff with additional support for the EDAM access charge. *See Cal. Indep. Sys. Operator Corp.*, 187 FERC ¶ 61,154 (2024). Also, in the EDAM Acceptance Order the Commission directed the CAISO submit a compliance filing that included certain corrections and clarifications, which the CAISO did and which the Commission later accepted. *See Cal. Indep. Sys. Operator Corp.*, Commission letter order, Docket No. ER23-2686-001 (Apr. 30, 2024).

[50] *See* EDAM Acceptance Order at P 2 and Ordering Paragraph (A).

[51] *See* EDAM Acceptance Order at P 2 and Ordering Paragraph (B). The Commission directed the CAISO to notify the Commission of the actual EDAM implementation date (*i.e.*, the effective date of the balance of the EDAM tariff revisions) within five business days after go-live occurs. *See id.* at P 2 and Ordering Paragraph (C).

[52] EDAM Acceptance Order at P 434 (emphases in original).

[53] *Id.*

[54] *Id.*

modeled, thus adhering to cost causation principles," and "[a]s congestion revenues only account for congestion within each BAA, this methodology accurately assigns the revenue to the BAA where the congestion arose."[55] Furthermore, the Commission found "the EDAM proposal accurately accounts for congestion costs and transfer revenues and provides for each EDAM Entity to sub-allocate costs and revenues within its BAA in accordance with its OATT or to a transmission customer."[56]

As to hedging tools, the Commission recognized the CAISO was providing "financial protection from congestion charges and losses" only for "balanced self-schedules associated with legacy transmission contracts and third-party ownership rights (i.e., transmission service rights not otherwise subject to an EDAM Entity's OATT)."[57] The Commission found the entirety of "CAISO's proposed EDAM transmission framework is just and reasonable and not unduly discriminatory or preferential"—including "the treatment of legacy transmission rights."[58]

Furthermore, the Commission recognized the CAISO "proposes several provisions for how an EDAM Entity's transmission customers can exercise their OATT rights in the market," including the CAISO's proposal "to require firm point-to-point and network transmission customers to register their rights with CAISO and obtain contract reference numbers by associating their transmission service with sources and sinks within or external to the EDAM."[59] The Commission found "CAISO's proposed approach to preserving firm transmission rights under the OATT to be just and reasonable."[60]

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[55] *Id.* at P 435.

[56] *Id.* at P 439. Pages 12-16 of the final proposal contained in attachment C to this filing provide a detailed hypothetical example that illustrates the allocation of congestion revenue under the current, Commission-approved methodology.

[57] EDAM Acceptance Order at P 244. Under the EDAM provisions of the CAISO Tariff, an EDAM legacy contract means a transmission service contract entered into with the EDAM transmission service provider prior to the effective date of the EDAM transmission service provider tariff or otherwise not governed by the terms of that tariff (including any contract executed pursuant to such transmission service contract) as may be amended in accordance with its terms or by agreement between the parties thereto from time to time. *See* Transmittal letter for August 2023 Filing, attachment B-2, at CAISO Tariff appendix A (new definition of EDAM Legacy Contract). Under the EDAM tariff provisions, an EDAM TOR means an ownership right by a third party on transmission facilities within an EDAM entity balancing area that are not subject to an EDAM transmission service provider tariff. *See id.*, attachment B-2, at CAISO Tariff appendix A (new definition of EDAM Transmission Ownership Right).

[58] *Id.* at P 307.

[59] *Id.* at P 245.

[60] *Id.* at P 307. After the Commission issued its order accepting the EDAM design, the CAISO filed another tariff amendment to enable inter-scheduling coordinator trades of energy in

No party filed a request for rehearing of the EDAM Acceptance Order. Thus, that order is now final and non-appealable.[61]

B. The Separate PacifiCorp and Portland General Electric Company Proceedings to Revise Their OATTs to Enable EDAM Participation

Within the past several months, two current WEIM participants have made filings with the Commission in separate proceedings to revise their respective OATTs to enable their participation in EDAM—specifically, to enable them to become both EDAM entities and EDAM transmission service providers. PacifiCorp filed OATT revisions in January 2025 (Docket No. ER25-951),[62] and PGE filed revisions to its own OATT in April 2025 (Docket No. ER25-1868).[63] Each filing includes OATT revisions to sub-allocate congestion revenue allocated to the EDAM entity by the CAISO through the day-ahead congestion offset charge code using a two-step sub-allocation process: in step one, the congestion revenue will be sub-allocated to balanced self-schedules submitted to EDAM associated with firm monthly and longer-term point-to-point and network OATT transmission service rights, and in step two any congestion revenue amount left over after step one will be sub-allocated to measured demand (*i.e.*, load and exports).[64]

The PacifiCorp and PGE proceedings are both currently ongoing. In each proceeding, numerous parties raised concerns regarding the allocation of congestion revenue due to parallel flow under the EDAM provisions of the CAISO Tariff and financial hedging tools for congestion costs available to holders of firm

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balancing areas participating in the WEIM and EDAM, which the Commission accepted effective as of the actual go-live date for EDAM. *See Cal. Indep. Sys. Operator Corp.*, 189 FERC ¶ 61,224 (2024).

[61] *See, e.g.*, *Old Dominion Elec. Coop. v. Pub. Serv. Elec. & Gas Co.*, 105 FERC ¶ 61,094, at P 17 (2003) (finding that "[b]ecause ODEC did not seek rehearing of the Complaint Order, that order became final and non-appealable 30 days following its issuance"); *CNG Transmission Corp.*, 86 FERC ¶ 61,013, at 61,030 (1999) ("Since no parties have filed a request for rehearing of that order, it is final and non-appealable.").

[62] PacifiCorp previously filed proposed revisions to its OATT to accomplish the same purpose in Docket No. ER25-573 but later withdrew that filing. PacifiCorp operates two balancing areas: PacifiCorp East (PACE) and PacifiCorp West (PACW).

[63] PGE operates a single balancing area.

[64] *See* transmittal letter for Revisions to the PacifiCorp OATT to Implement the Extended Day-Ahead Market, Docket No. ER25-951-000, at 18-20 (Jan. 16, 2025); transmittal letter for Revisions to the Portland General Electric Company OATT to Implement the Extended Day-Ahead Market, Docket No. ER25-1868-000, at 17 (Apr. 3, 2025).

OATT transmission service rights in the EDAM area.[65] These parties claimed the CAISO might not allocate sufficient congestion revenue to the EDAM balancing area to support sub-allocation to transmission customers and protect them from congestion costs for exercising their firm OATT transmission service rights.

The CAISO responded in each proceeding that the allocation of congestion revenue arising from flows across multiple EDAM balancing areas is an issue arising solely under the EDAM provisions of the CAISO Tariff and is therefore beyond the scope of the PacifiCorp and PGE OATT filings currently before the Commission. The CAISO stated the issue cannot be addressed unilaterally by PacifiCorp or PGE through their OATTs, and the respective OATTs of PacifiCorp and PGE contain mechanisms to sub-allocate to transmission customers the entire pool of congestion revenue allocated to the EDAM entity under the Commission-approved market design.

The CAISO explained that the magnitude of potential congestion costs to be allocated to PacifiCorp transmission customers because of EDAM optimizing transactions in the broader EDAM market area is expected to be much less than some projections claimed by parties in those proceedings. The CAISO also explained the significant beneficial effects EDAM would have on congestion management, including the ability to resolve congestion more effectively and reduce the frequency of binding transmission constraints.

Nonetheless, due to the questions and concerns raised in the proceedings and recognized potential to enhance the approved methodology as the CAISO and stakeholders evolve toward a long-term durable design, the CAISO determined it was appropriate to initiate an expedited stakeholder process narrowly focused on the EDAM congestion revenue allocation issue. The CAISO explained the purpose of that expedited process was to provide assurances to stakeholders and the Commission that the issue would be timely addressed in an appropriate forum because it is beyond the scope of the proceedings on PacifiCorp's and PGE's OATT filings.[66] The CAISO committed, at the end of the stakeholder process, to either: (1) make a filing under FPA section 205 to modify the EDAM congestion revenue allocation methodology on a transitional basis or (2) report back to the Commission in the event it proposed no modifications to the existing EDAM congestion revenue methodology approved in the EDAM Acceptance Order. The CAISO's responses in the proceedings also provided the latest information then available regarding the status of the ongoing stakeholder

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[65] Under the EDAM provisions of the CAISO Tariff, the EDAM area means the combined CAISO balancing area and all EDAM entity balancing areas. *See* August 2023 Filing, attachment B-2, at CAISO Tariff appendix A (new definition of EDAM Area).

[66] Nor could the issue be addressed in the proceeding on the August 23 Filing (Docket No. ER23-2686). As explained above in section II.A.3.b, the EDAM Acceptance Order is now final and non-appealable. That proceeding has therefore concluded.

process and explained that the Commission need not wait until the CAISO stakeholder process concluded before issuing orders accepting the PacifiCorp and PGE OATT revisions.[67]

C. The Stakeholder Process and Approval by the CAISO Governing Board and WEM Governing Body

The CAISO initiated the stakeholder process that ultimately resulted in this tariff amendment filing by posting an issue paper for stakeholder review on March 17, 2025.[68] The CAISO later held a workshop with stakeholders regarding the issue paper, during which the CAISO gave a presentation and considered stakeholder input. The CAISO also provided an opportunity for stakeholders to submit written comments on the issue paper and the presentation to the CAISO.

Over the next two months, the CAISO posted a draft final proposal then a revised draft final proposal, each time holding a workshop with stakeholders afterwards to discuss the posting and providing an opportunity for written stakeholder comments. On June 6, 2025, the CAISO posted a final proposal (Final Proposal) for stakeholder review informed by the prior round of stakeholder comments.[69]

In addition to these steps, the meeting of the MSC held on March 28, 2025 included a discussion of EDAM congestion revenue allocation issues. CAISO staff and Dr. Scott Harvey made presentations. The MSC meeting held on May 2, 2025, included discussion on the same topic and additional presentations by CAISO staff and Dr. Harvey. The MSC held a third meeting to discuss its Opinion, which was adopted in that meeting on June 16, 2025.[70] The WEM Governing Body was also briefed by its market expert, Susan Pope, concerning this issue in its public meeting arranged specifically for that purpose on April 8, 2025. The WEM Governing Body market expert presented her written opinion at

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[67] *See* Motion for Leave to Answer and Answer of the California Independent System Operator Corporation to Comments, Protests, and Answer, Docket No. ER25-951-000, at 92-99 (Mar. 7, 2025); Comments on PacifiCorp Response to Deficiency Letter, Status Update, and Motion for Leave to File Answer and Limited Answer to Certain Answers, of the California Independent System Operator Corporation, Docket No. ER25-951-000, at 14-20 (May 19, 2025); Motion for Leave to File Answer and Answer of the California Independent System Operator Corporation to Comments and Protests, Docket No. ER25-1868-000, at 10-15 (May 19, 2025).

[68] *See* the materials posted on the CAISO website page regarding the stakeholder process for the EDAM initiative, https://stakeholdercenter.caiso.com/StakeholderInitiatives/Extended-day-ahead-market.

[69] The Final Proposal is contained in attachment C to this filing and is also available at the website page cited in the footnote immediately above.

[70] *See* https://www.caiso.com/meetings-events/topics/market-surveillance-committee.

the public meeting held on June 18, 2025.[71] The CAISO considered the views discussed at the meetings prior to June 6, 2025 in developing the Final Proposal, and addressed the MSC and market expert opinions during the CAISO Governing Board and the WEM Governing Body meeting held on June 19, 2025.[72]

On June 11, 2025, the CAISO posted draft revisions to its tariff to implement the Final Proposal and provided an opportunity to submit written comments by June 20, 2025. The CAISO held a meeting with stakeholders to discuss the written comments and the draft tariff revisions on June 24, 2025 before the CAISO finalized the tariff revisions for filing. The CAISO Governing Board and the WEM Governing Body jointly authorized the CAISO to submit this tariff amendment filing at their meeting held on June 19, 2025.[73]

III. The Enhanced Methodology for Allocating Congestion Revenue Under EDAM

The EDAM Acceptance Order authorized the CAISO to allocate all congestion revenue to the EDAM balancing area where the internal transmission constraint arose. However, based on the targeted proposal developed in the expedited stakeholder process to address questions and concerns raised by numerous stakeholders about that allocation methodology, the CAISO now proposes to allocate congestion revenue in EDAM using the more nuanced methodology described below.[74] The nuance will depend on whether the accrual of congestion revenue involved parallel flow and the exercise of eligible firm OATT transmission service rights—*i.e.*, rights for transmission service identified

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[71] *See* https://www.westerneim.com/Pages/Governance/GoverningBody.aspx; https://www.caiso.com/documents/revised-final-agenda-wem-governing-body-meeting-apr-08-2025.pdf.

[72] The CAISO discusses feedback provided by stakeholders and the CAISO Department of Market Monitoring and MSC, and the CAISO's responses to that feedback, below in section III.D.

[73] *See* https://www.caiso.com/about/governance-committees. Prior to the June 19, 2025, meeting, Anna McKenna, the CAISO's Vice President Market Design and Analysis, provided a memorandum to the CAISO Governing Board and the WEM Governing Body (Memorandum) regarding the changes now proposed in this tariff amendment filing. The Memorandum is contained in attachment D to this filing and is also available at https://www.caiso.com/documents/decision-on-edam-congestion-revenue-allocation-memo-june-2025.pdf. At the June 19 meeting, the CAISO also gave a presentation to the CAISO Board and WEM Governing Body (Presentation) regarding the proposed changes. The Board Presentation is contained in attachment E to this filing and is also available at decision-on-edam-congestion-revenue-allocation-presentation-june-2025.pdf.

[74] After EDAM goes live, congestion revenue in the WEIM will continue to be allocated to the balancing area where the constraint is located. No changes to real-time congestion revenue allocation in the WEIM or the treatment of EDAM Legacy Contracts, EDAM Transmission Ownership Rights, Existing Transmission Contracts or Transmission Ownership Rights are proposed in this filing.

in the EDAM transmission service provider tariff as firm services of a sufficient duration. The pending PacifiCorp OATT and the PGE OATT revisions both identify such eligible transmission service rights.[75]

Under the approved EDAM framework, there is a single congestion revenue allocation methodology that can be broken down into three categories of congestion revenue allocation. Category one, which applies to the allocation of congestion revenue not associated with parallel flow, and category three, which applies to the allocation of congestion revenue associated with parallel flow but not associated with the exercise of eligible firm OATT transmission service rights, will use the same congestion revenue allocation methodology approved in the EDAM Acceptance Order. Therefore, categories one and three do not require any additional CAISO Tariff revisions, further justification, or new Commission authorization. Only category two, which applies to the allocation of congestion revenue associated with both parallel flow and the exercise of eligible firm OATT transmission service rights, requires the new, targeted tariff revisions the CAISO proposes in this filing. The methodology described below for allocating congestion revenue under category two is just and reasonable and addresses the questions and concerns the CAISO established the expedited stakeholder process to address. [76]

A. Allocation of Congestion Revenue Not Associated with Parallel Flow, Using the Methodology Already Approved in the EDAM Acceptance Order

The CAISO will continue to allocate internal congestion revenue arising from a binding transmission constraint within an EDAM balancing area—*i.e.*, congestion revenue not associated with parallel flow—to that same EDAM balancing area, using the same methodology approved in the EDAM Acceptance Order. As explained above, the Commission has already found this methodology for allocating congestion revenue to the EDAM balancing area where the transmission constraint arose to be just and reasonable.[77]

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[75] In accordance with CAISO Tariff section 33.11.1.2 as approved in the EDAM Acceptance Order, the EDAM entity will be required to ensure that congestion revenue allocated to its EDAM entity scheduling coordinator under each of the three categories is sub-allocated by all applicable EDAM transmission service providers as may be detailed in the EDAM transmission service provider tariff and business practices.

[76] The Final Proposal contained in attachment C to this filing provides detailed hypothetical examples that illustrate how the CAISO will allocate congestion revenue under the enhanced methodology. *See* Final Proposal at 21-24 and appendix 1 (at 35-43) (illustrating by example how congestion revenue would be allocated under the current and proposed EDAM design).

[77] *See supra* section II.A.3.b (discussing EDAM Acceptance Order at PP 434-35).

B. Allocation of Congestion Revenue Associated with Both Parallel Flow and Eligible Firm OATT Transmission Service Rights, Using the Methodology Proposed in this Proceeding

The CAISO proposes to allocate congestion revenue associated with parallel flow accruing within an EDAM balancing area due to a binding transmission constraint within another EDAM balancing area to the EDAM balancing area where the congestion revenue accrued (rather than the balancing area where the transmission constraint arose). This treatment will be afforded for the exercise of eligible firm transmission service rights through submission of a balanced day-ahead self-schedule associated with a contract reference number that facilitates the use of such transmission rights. This modification of the allocation methodology is new and requires Commission approval in this proceeding.

To implement this change in methodology, the CAISO proposes to add a new tariff section entitled EDAM Entity Balancing Authority Area MCC Adjustment.[78] The new tariff section states that for each settlement period of the day-ahead market, the CAISO will determine through detailed calculations in the business practice manual for settlements and billing the congestion difference within the EDAM area from the contribution of qualified and balanced day-ahead self-schedules registered by the EDAM entity in each EDAM entity balancing area to the MCC at each resource location and intertie in the EDAM area. This congestion difference will be allocated to the EDAM entity balancing area where the qualified and balanced day-ahead self-schedule is associated. Under the new tariff section, qualification (*i.e.*, eligibility) for this adjustment will be afforded to long-term firm and monthly firm point-to-point and network integration transmission service rights, including conditional firm, as defined under the EDAM transmission service provider tariff (with shorter-term rights being ineligible for this treatment). A day-ahead self-schedule will be considered balanced for purposes of this adjustment in accordance with the provisions of the CAISO Tariff addressing EDAM legacy contracts (CAISO Tariff section 33.16) applicable to the determination of whether an EDAM legacy contract is balanced in the day-ahead market.

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[78] New CAISO Tariff section 33.11.1.2.1 as proposed in this filing. The CAISO also proposes to revise other, previously approved sections of the tariff that implement the EDAM design to incorporate any adjustments made in accordance with the new tariff section. See CAISO Tariff sections 33.11.1.2 and 33.11.3.9.3 as revised in this filing. In addition, the CAISO proposes to revise the hourly CRR congestion fund calculation to omit any funds needed to perform adjustments made in accordance with the new tariff section. Without this adjustment, the congestion revenue from parallel flow in the CAISO BAA would be used to fund CRRs in the CAISO BAA. The amendment to the CRR settlement provisions prevents that from happening and ensures the CAISO is able to fund the payments called for through this filing. *See* CAISO Tariff section 11.2.4.1.2 as revised in this filing.

Underpinning the overall calculation of congestion revenue is the FNM optimization described in Section II.A.1 above, with the overall settlement following as a result of the MCC "breakdown" process described above.[79] This process determines the contribution of each source and sink location to each constraint across the EDAM footprint and provides the information for settlement by balancing area according to these three categories, including the adjustment noted in this category. Implementing detail on settlement charge code formulations and billing determinant components are described in the business practice manual for settlements and billing, which will be updated to reflect the modification proposed in this amendment.[80] This updated process is meant to fill in the technical details and provide some opportunity to review and revise the calculations if the CAISO and stakeholders find there is something missing or that is incorrect. Further, the examples included in appendix 1 to the Final Proposal included as Attachment C to this filing illustrate the application of the calculation and settlement that results from this process, both under the current design and the modification proposed in this amendment.

Using the same transmission service registration process approved in the EDAM Acceptance Order, transmission customers will register their firm point-to-point and network transmission service rights under the applicable OATT with the CAISO to identify the characteristics of the rights from source to sink.[81] These registered transmission service rights will be associated with a contract reference number (CRN) which, when included in the bid submission, will associate that bid with existing OATT transmission service rights.

When the scheduling coordinator representing the transmission customer with eligible firm OATT rights submits a day-ahead self-schedule with a CRN at the source location—whether a physical generator in an EDAM balancing area or an import location—the market will recognize that this source location is associated with registered transmission service rights. Similarly, when a scheduling coordinator submits a day-ahead self-schedule at the sink location—whether scheduling the load within an EDAM balancing area or scheduling an export at a location—the market will recognize that the sink location is associated with a CRN representing those registered firm transmission service rights. The CAISO will collect resulting day-ahead congestion revenue associated with parallel flow for the balanced source/sink self-schedules associated with CRNs representing the exercise of eligible firm point-to-point and network transmission service rights. The CAISO then will allocate that congestion revenue to the EDAM entity for the balancing area where the congestion revenue accrued

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[79] *See supra* section II.A.2.

[80] *See* the settlement charge code configurations available at https://bpmcm.caiso.com/Pages/SnBBPMDetails.aspx?BPM=Settlements%20and%20Billing.

[81] Under the approved process, the balancing authority and transmission provider will register the underlying service rights with the CAISO.

through an adjustment to the total congestion revenue collected across the EDAM footprint that would otherwise be allocated to the balancing area where the binding constraint was located.

In the expedited stakeholder process, some stakeholders indicated a desire to identify guiding objectives for the design of an enhanced EDAM congestion revenue allocation methodology to address the questions and concerns expressed by parties in the PacifiCorp and PGE proceedings. Those objectives, which the CAISO included and discussed in the Final Proposal,[82] are shown in underlined text in the bullet points immediately below. The enhanced allocation methodology presented in this amendment supports each objective identified in the stakeholder process:

- <u>The allocation methodology will support the management of congestion cost exposure for transmission customers exercising their firm OATT transmission service rights</u>. The CAISO will allocate congestion revenue associated with parallel flow for the exercise of eligible firm point-to-point and network transmission service rights based on balanced source/sink self-schedules to the EDAM balancing area where that congestion revenue accrued. The applicable EDAM transmission service provider can then sub-allocate the congestion revenue under the terms of its OATT to provide a more accurate congestion cost hedge to transmission customers exercising their eligible firm point-to-point and network transmission service rights associated with congestion price effects resulting from internal or external transmission constraints. As such, this allocation approach will address the most significant questions and concerns raised by commenters this year in the PacifiCorp and PGE proceedings.

- <u>The allocation methodology will support market efficiency incentives</u>. Some participants in the expedited stakeholder process expressed concern this allocation methodology could undermine market efficiency by incenting self-scheduling associated with eligible firm point-to-point and network OATT transmission service rights (using a CRN). This concern is premised on the opportunity to obtain a congestion cost hedge more readily based on the sub-allocation mechanism contained in the applicable EDAM transmission service provider's OATT when self-scheduling. As explained in the Final Proposal, however, the CAISO's analysis of PacifiCorp's planned participation in EDAM indicates that, even if such an incentive exists, the incentive to self-scheduled firm point-to-point and network OATT transmission service rights compared with the volume of all network transmission service rights and designated network resource rights should be mitigated because PaciCorp's merchant holds the

[82] *See* Final Proposal at 9-10, 18.

majority of eligible rights and does not intend to self-schedule. Similarly, regarding long-term firm point-to-point transmission service rights and considering that wheeling through and export transactions must be self-scheduled under the EDAM design, the incremental incentive resulting from the allocation methodology under category two to self-schedule internal resources that support exports is relatively small.[83] Based on this analysis, the CAISO believes it is unlikely that the enhanced allocation methodology will undermine market efficiency in the PacifiCorp balancing areas.[84]

In any event, the CAISO is following MSC recommendations and is already taking steps to identify the additional information it will gather prior to implementation, monitor market performance after EDAM goes live, and report out accordingly. This monitoring will include reviewing the extent to which the modified allocation methodology may be causing an incremental incentive to self-schedule to the detriment of market efficiency. Furthermore, as discussed below,[85] the CAISO plans to discuss with stakeholders a future near-term enhancement to enable the allocation of congestion revenue associated with parallel flow in a manner that does not further incentivize self-scheduling. The goal of further enhancements is to facilitate allocation of congestion revenues among balancing areas that is not dependent on the entities bidding approach, thereby reducing or eliminating any incentive to self-schedule to more readily obtain a congestion cost hedge.

- The allocation methodology will minimize abrupt congestion cost shifts between EDAM balancing areas. The methodology under category two will allocate to an EDAM balancing area the congestion revenue associated with parallel flow and the day-ahead exercise of firm transmission service rights for balanced self-schedules that are qualified under the OATT of an EDAM transmission service provider for that same

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[83] PacifiCorp's merchant function, which serves its native load within its two balancing areas, holds 95 percent of the total long-term designated network resources (17,939 MW) on PacifiCorp's system whose bidding and market participation practices should not be driven by an incentive to self-schedule and derive a congestion hedge according to representations they have made, including most recently in written comments to the WEM Governing Body and CAISO Governing Board supporting the proposed modification. *See* Final Proposal at 19-21; and Letter from PacifiCorp to the CAISO Governing Board and WEM Governing Body, June 13, 2025, page 1, available at https://www.caiso.com/documents/pacificorp-public-comment-letter-decision-on-edam-congestion-revenue-allocation-june-2025.pdf.

[84] The CAISO was unable to conduct a similar evaluation for the PGE balancing area, which is the only other balancing area planned for participation within the first year of EDAM operations. Nonetheless, the PacifiCorp evaluation represents the largest volume of transmission schedules that could be self-scheduled within that first year.

[85] *See infra* section IV.

EDAM balancing area. Thus, the proposed allocation methodology under category two eliminates the abrupt cost shifts between EDAM balancing areas that otherwise would result due to a change from the longstanding approach that exists today, whereby each balancing area is not responsible for parallel flow cost impacts its schedules cause in another balancing area, to an approach under the Commission-approved congestion revenue allocation methodology, whereby 100 percent of the congestion revenue would be allocated to the balancing area where the constraint is located regardless of where in the EDAM footprint the flow originates. Thus, the proposed enhancement will mitigate that cost shift and ease the transition to EDAM.[86]

- The allocation methodology will support EDAM entity mechanisms for sub-allocating congestion revenue. The allocation methodology under category two will provide congestion revenue aligned more closely with the customer's exercise of its transmission rights—*i.e.*, the congestion revenue associated with parallel flow and firm OATT transmission service rights—which the EDAM transmission service provider can then sub-allocate in accordance with its OATT. Thus, the allocation methodology under category two supports mechanisms identified or established by prospective EDAM entities for sub-allocation of congestion revenue received from the CAISO under the terms of the EDAM transmission service provider's OATT, thereby allowing the EDAM transmission service provider to mitigate congestion cost exposure of its transmission customers.

- The allocation methodology will support timely implementation of EDAM. The CAISO already has the functionality to implement the allocation methodology under this category and will be able to configure the associated settlement charge codes in time for the planned start of EDAM on May 1, 2026. As such, this approach addresses significant stakeholder concerns in a manner which will not delay the delivery of the significant benefits projected for EDAM and will in fact ease the transition to EDAM.

For the reasons explained above, the Commission should find the CAISO Tariff revisions to implement the congestion revenue allocation methodology under this category are just and reasonable.

[86] *See, e.g.*, *Indicated SPP Transmission Owners v. Sw. Power Pool, Inc.*, 162 FERC ¶ 61,213, at PP 63-66 (discussing "cases in which the Commission found that some degree of cost shifting was just and reasonable," and stating that "the magnitude of a cost shift, not the mere existence of a cost shift, is what is relevant to determining whether a rate is just and reasonable").

C. Allocation of Congestion Revenue Associated with Parallel Flow but Not Associated with Eligible Firm OATT Transmission Service Rights, Using the Methodology Already Approved in the EDAM Acceptance Order

Category two described above represents the only proposed change to the approved congestion revenue allocation methodology, *i.e.*, nothing about this third category of congestion revenue allocation changes as a result of this proposal. However, because the modification in category two is narrowly tailored to apply only to long-term firm and monthly firm point-to-point and network integration transmission service rights, there will inherently be other congestion revenue associated with other market transactions. The CAISO will allocate any remaining congestion revenue associated with parallel flow that is not allocated using the second category discussed above—*i.e.*, any congestion revenue associated with parallel flow other than congestion revenue allocated based on the exercise of eligible firm OATT transmission service rights through a balanced source/sink self-schedule—to the EDAM balancing area where the transmission constraint arose. Again, as with the first category, the Commission has already found this methodology for allocating congestion revenue to the EDAM balancing area where the transmission constraint arose is just and reasonable and adheres to cost causation principles.[87]

The allocation is narrowly tailored and supports the structure of the OATT amendments pending in the PacifiCorp and PGE proceedings. In their filings, PacifiCorp and PGE explain that their congestion "reversal" treatment is confined to monthly and long-term OATT firm rights, including conditional firm, because that is the class of customers who may have made reservations prior to the adoption of EDAM and that this aligns with the higher scheduling priority the market affords self-schedules.[88] Here it is important to keep in mind that the CAISO balancing area differs from other balancing areas in the Western Interconnection in that the CAISO market design does not include firm point-to-point and network transmission products to which congestion revenue resulting from parallel flow can ultimately be sub-allocated. Instead, the CAISO offers a single type of transmission service (new firm use) and distributes congestion revenue in its balancing area through CRRs that provide a day-ahead financial hedge against congestion costs but are not tied to use of the transmission system. Due to this inherent difference between the CAISO and other balancing areas—and due to the functionality the CAISO will use to allocate congestion revenue—the CAISO does not currently have a mechanism that would allow the

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[87] *See supra* section II.A.3.b (discussing EDAM Acceptance Order at PP 434-35).

[88] *See* transmittal letter for Revisions to the PacifiCorp OATT to Implement the Extended Day-Ahead Market, Docket No. ER25-951-000, at 18-19 (Jan. 16, 2025); transmittal letter for Revisions to the Portland General Electric Company OATT to Implement the Extended Day-Ahead Market, Docket No. ER25-1868-000, at 17 (Apr. 3, 2025).

CAISO balancing area to be allocated congestion revenue associated with parallel flow that accrues in the CAISO balancing area because of a transmission constraint that arises in a *neighboring* EDAM balancing area.

Nevertheless, under this category, the CAISO balancing area will be allocated new congestion revenue associated with parallel flow that arises in neighboring EDAM balancing areas because of a binding transmission constraint internal to the CAISO balancing area. This new congestion revenue will accrue from market transactions not accounted for under category two and will be incremental to the congestion revenue the CAISO receives today, provide incremental benefit moving forward with EDAM and support funding of CRRs in the CAISO balancing area.[89]

D. Stakeholder Feedback and CAISO Responses

Most stakeholders submitting comments in the expedited stakeholder initiative broadly support, or do not oppose, the proposed congestion revenue allocation methodology modification discussed above at the start of EDAM implementation. The DMM also believes the revised methodology is a reasonable alternative transitional measure which, despite increasing incentives to self-schedule that potentially could reduce overall benefits, supports timely implementation of EDAM and will still create incremental benefits relative to the pre-EDAM market. The MSC is fundamentally concerned with the incentive to self-schedule, raises additional concerns, and concludes additional information and analysis should be performed before moving forward. Although the MSC recognizes the approach is a compromise and does not oppose moving forward, it also expresses a preference to proceed under the approved methodology coupled with negotiated flow entitlements until a longer-term solution can be developed. The WEM Governing Body market expert shares similar caution as the MSC, while more clearly supporting the proposal because it will enable timely implementation of EDAM, allow the gathering of operational information to inform further enhancements, and produce substantial economic and reliability benefits for customers.

These experts and the majority of stakeholders recognize the proposed approach is responsive to the important questions and concerns raised by stakeholders and as an enhancement to the existing EDAM congestion revenue allocation methodology that will eliminate identified impediments to broader

[89] In addition, as discussed below in section IV, to further mitigate associated CRR funding risks the CAISO will explore with stakeholders a near-term CRR modeling enhancement to reduce the impact of parallel flow from neighboring EDAM balancing areas on the funding of released CRRs.

participation in EDAM and ease the transition to EDAM.[90] Many stakeholders underscored that their support for the proposed approach is based on the understanding it is intended to be an interim (*i.e.*, transitional) solution, noting the expectation the CAISO and stakeholders will continue to collaborate on near-term enhancements within the first year after EDAM goes live and work toward a durable long-term design for EDAM congestion revenue allocation.[91]

Some stakeholders opposed the proposal for either of two primary reasons: (1) due to a preference for a holistic long-term design over interim

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[90] Many opponents of the OATT revisions that PacifiCorp and PGE have proposed to implement EDAM supported the CAISO proposal embodied in this tariff amendment filing. For example, the Bonneville Power Administration stated it supports the revised proposal's recommendation to allocate congestion rent associated with parallel flows to the EDAM balancing authority area where the congestion revenues are collected (and not where the constraint is located)." Also, Northwest & Intermountain Power Producers Coalition (NIPPC) stated it "agrees that the proposed Revised Draft Final Proposal represents a significant improvement over the current mechanism which allocates all congestion revenue to the BAA where a constraint is located. Rather, the Revised Draft Final Proposal would allocate congestion revenue to the BAAs where the congestion revenue materializes (based on the balanced self-schedules of customers using long-term and monthly transmission rights)." Powerex stated "the Proposal is a significant improvement over the current EDAM tariff, as it appears to provide a sufficient congestion revenue allocation to EDAM Entities to enable them to provide a proper source-to-sink congestion hedge for registered monthly or longer firm OATT transmission rights that are self-scheduled in the day-ahead market." In addition, Western Power Trading Forum (WPTF) stated "the proposal strikes an appropriate balance as an interim step and we are encouraged to see the CAISO already having a plan to continue discussions towards long-term durable solutions with the addition of near-term enhancements to more immediately address the self-scheduling incentive concern." The stakeholder comments quoted in this footnote are available at https://stakeholdercenter.caiso.com/Comments/AllComments/98b9032c-abc1-48ff-ab7c-a0c4a879eff7#org-aee54fba-60f2-451d-97a2-959a833bfa81.

[91] Idaho Power Company (Idaho Power) stated it "appreciates CAISO's recognition of this and its commitment to looking for a resolution to this in the near-term solution phase. Idaho Power supports this approach given the complexity of the issue and the sensitivity to the EDAM go-live date." NV Energy states it "conditioned its support for the initiative on CAISO continuing with a subsequent stakeholder process to further enhance the design by providing parallel flow congestion protection for bid in load to remove the incentive to self-schedule." Pacific Gas and Electric Company (PG&E) stated it "supports development of the near-term enhancement to eliminate the incentive to self-schedule." Southern California Edison Company (SCE) stated it supports the proposal "as an interim design but emphasizes the need to follow through with both the near-term enhancements and finding a permanent solution in the 12-24 month period following implementation." San Diego Gas & Electric Company (SDG&E) stated it supports the proposal as a "short-term, interim methodology notwithstanding the associated questions and concerns." The Cities of Anaheim, Azusa, Banning, Colton, Pasadena, and Riverside, California (collectively, Six Cities) stated they "do not oppose implementation of the approach for allocating Extended Day-Ahead Market ('EDAM') congestion revenues as described in the [p]roposal on a basis that (i) is expressly transitional and (2) is limited in application to eligible OATT rights existing as of the go-live date for the EDAM." The stakeholder comments quoted in this footnote are available at the same website listed in the footnote immediately above.

measures, or (2) out of concern the proposal could apply to firm OATT transmission service rights established after EDAM goes live.[92]

The CAISO understands the desire for a long-term solution. In the current circumstances, however, the CAISO has chosen not to let the hypothetical perfect solution that could be achieved in the future be the enemy of the present good. Realistically, a holistic long-term design, including new market mechanisms to hedge congestion, could not be developed and implemented for several years. Similarly, negotiating and implementing flow-gate limits to manage potential congestion cost shift exposure under the current design would extend beyond the planned implementation of EDAM. Not adopting the proposed transitional improvements on EDAM day one, however, would leave stakeholders' outstanding concerns regarding their exposure to congestion costs resulting from parallel flows unresolved. The enhancements proposed in this filing will address those concerns and provide additional tools for congestion hedging, facilitating timely implementation of, a smooth transition to, and further expanded participation in EDAM. Importantly, implementing this enhancement will not prevent the CAISO from evolving the design over time, informed by operational experience, analysis and stakeholder input. Stakeholders broadly support this approach, and the CAISO urges the Commission to acknowledge the circumstances and accept this amendment.

Regarding stakeholder concerns about customers signing up for new firm OATT services after this enhancement is approved, the CAISO acknowledges the concern and identifies several mitigating factors. First, as a practical matter, the ability to acquire new long-term firm transmission in the West is severely limited. Additionally, any attempt to "grandfather" certain OATT rights would need to also contend with the implications for future load growth. Finally, long-term design discussions will consider different frameworks for handling parallel flow between EDAM balancing areas, such as negotiated flow entitlements, that would move away from tying congestion revenue allocation to the specific exercise of firm transmission rights.

Many stakeholders also expressed concern the proposed design may incentivize broad self-scheduling of generation across the EDAM footprint and thereby undermine market efficiency. To address that concern, the CAISO

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[92] The Utah Municipal Power Agency and Deseret Generation & Transmission Co-operative, Inc. d/b/a Deseret Power (together, UMPA/Deseret) stated "the discussion surrounding congestion revenue allocation should focus on returning congestion revenue to the correct transmission customer, not the correct balancing authority area." The Energy Authority (TEA) and its Regional Partners (collectively, TEA-RPs) stated they "see the CAISO's EDAM Congestion Revenue Allocation [p]roposal . . . as insufficient to deliver the equitable, efficient outcomes and benefits market participants expect from EDAM." The stakeholder comments quoted in this footnote are available at the same website listed in the footnotes immediately above.

performed an analysis regarding PacifiCorp and, based on the analysis, the CAISO explained why it believed a self-scheduling incentive may not be widespread.[93] To further address the concern, the CAISO indicated its intent to consider a near-term enhancement to enable congestion revenue allocation associated with parallel flow based on cleared market schedules associated with eligible firm point-to-point and network transmission service rights as defined under an EDAM transmission service provider's tariff, regardless of whether those market schedules were for self-schedules or economic bids. The CAISO committed to gather additional information, evaluate options given the MSC and stakeholder perspectives, and then develop a proposal in the first year of EDAM operations as a possible method to reduce or eliminate incentives to self-schedule.[94]

Another stakeholder concern centered on the benefits of developing parallel flow congestion treatment for CRRs within the CAISO balancing area that is comparable to the treatment afforded firm OATT transmission service rights in other EDAM balancing areas.[95] Because the CAISO balancing area does not offer transmission service rights comparable to the monthly and long-term firm point-to-point and network integration services addressed by the second category for congestion revenue allocation, the CAISO balancing area may not be allocated an equivalent volume of parallel flow congestion revenues at the launch of EDAM as it would under the current design because it will not accrue the congestion revenue associated with the parallel flow effects of its schedules on constraints in a neighboring EDAM balancing area under category two. Although customers in the CAISO balancing area and customers in other balancing areas participating in EDAM are not similarly situated in this regard, the CAISO appreciates this different treatment could be viewed as asymmetrical. However, this is not undue discrimination under the circumstances.[96]

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[93] *See supra* section III.B.

[94] *See id.*

[95] Appian Way Energy Partners (Appian Way) expressed a concern that, while the CAISO proposes "near-term enhancements . . . to address unequal treatment of CAISO CRR firm rights when CRRs flow on external constraints; the [proposal] is silent with respect to unequal treatment of CAISO CRR firm rights with respect to internal constraints within CAISO." The California Department of Water Resources (CDWR) stated it "believes that maintaining revenue adequacy and fair congestion prices throughout the CAISO BAA with the inclusion of EDAM constraints from other BAA's is key to incrementally improve the Day Ahead CRR product." DC Energy California, LLC (DC Energy) stated it "believes the CAISO should be proactive in pursuing CRR modeling enhancements, so that enhanced models are available when EDAM is first implemented." The stakeholder comments quoted in this footnote are available at https://stakeholdercenter.caiso.com/Comments/AllComments/98b9032c-abc1-48ff-ab7c-a0c4a879eff7#org-aee54fba-60f2-451d-97a2-959a833bfa81.

[96] Section 205 of the FPA prohibits a public utility from "mak[ing] or grant[ing] any *undue* preference or advantage to any person or subject[ing] any person to any *undue* prejudice or disadvantage." FPA section 205(b), 16 U.S.C. § 824d(b) (emphasis added). So long as there is

The proposal is not unduly discriminatory because today, although entities in the CAISO balancing area can also self-schedule to manage their resources, their congestion exposure is not constrained based on their use of the grid. Congestion revenue rights are not a "use it or lose it" right as are firm transmission rights under the OATT. In the CAISO balancing area, those entities that have paid for the embedded cost of the system need not bid in their resources to be served by the market and receive the revenue through the CRRs they obtain regardless of their use. In other words, the CAISO balancing area does not have a "use it or lose it" problem comparable to EDAM balancing areas. Simply put, this proposal is the best way the CAISO can address the transition of OATT users to the market for day-one even though the CAISO cannot apply this to the CAISO balancing area absent future enhancements.

Allocation of parallel flow congestion revenues to the CAISO balancing area under category two also cannot simply be available at the outset of EDAM because such enhancements require further consideration with stakeholders and additional system changes. In other words, the only alternative would be to defer addressing the pending important concerns of a majority of stakeholders and potentially risk delaying the start of EDAM. To address these stakeholder concerns, the CAISO commits to evaluate this matter further and, assuming stakeholder support, enhance this design element.

Stakeholders also sought clarity on how CRRs will be settled once EDAM goes live, when the day-ahead market footprint will be larger than the CRR market footprint. The CAISO clarified that the rules and intent behind CRR allocation and payment are unchanged due to EDAM. Because these questions on CRR settlement and modeling in EDAM are separate from questions about the proposed method for allocating EDAM congestion revenue, on June 12, 2025, the CAISO hosted a separate stakeholder workshop to clarify implementation details of CRRs under EDAM.[97] The CAISO will also continue discussing this CRR topic with stakeholders.

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no undue preference or discrimination, the public utility satisfies the requirements of FPA section 205. "Whether a rate or practice is unduly discriminatory depends on whether it provides different treatment to different classes of entities and turns on whether those classes of entities are similarly situated." *Calpine Corp. v. PJM Interconnection, L.L.C.*, 171 FERC ¶ 61,035, at P 318 (2020). *See also Town of Norwood v. FERC*, 202 F.3d 392, 402 (1st Cir. 2000) ("But differential treatment does not necessarily amount to *undue* preference where the difference in treatment can be explained by some factor deemed acceptable to regulators (and the courts).") (emphasis in original).

[97] *See* https://www.caiso.com/meetings-events/topics/miscellaneous-meetings. This meeting was separately noticed and calendared because it is not directly associated with a new or ongoing stakeholder initiative (*see* https://www.caiso.com/meetings-events/calendar).

Stakeholders highlighted the importance of closely monitoring congestion patterns across the EDAM footprint, the location and effect of transmission constraints on EDAM prices, the magnitude of allocated congestion revenues, and patterns of self-scheduling in EDAM. In response to these comments, the CAISO not only committed to such reviews, but it also provided plans for detailed monitoring and for sharing the operational information gleaned through that monitoring with market participants in regular forums. This operational information will help inform future evolution of the design of EDAM congestion revenue allocation framework.

A few stakeholders raised concerns regarding potential gaming opportunities for market participants to derive a congestion hedge (through the EDAM entity) and potentially submit other offsetting schedules without the intent to perform. The CAISO emphasizes that under the CAISO's Rules of Conduct, and specifically CAISO Tariff section 37.3.1.1, market participants must submit bids "from resources that are reasonably expected to be available and capable of performing at the levels specified in the Bid." These requirements should mitigate gaming risk in addition to monitoring which the DMM performs regarding participation and bidding in the market. Absent stronger evidence of gaming, the CAISO sees no need to consider additional or new provisions to address gaming beyond provisions present in the existing tariff.

One stakeholder requested clarification that the full congestion "perfect hedge" will continue to be provided to parties exercising TORs/ETC/legacy transmission contracts (pre-OATT) in accordance with the CAISO Tariff. The CAISO confirms that this element of the EDAM design is not affected by this tariff amendment. The CAISO will continue, as under the approved EDAM design, to directly settle congestion rents with parties exercising these legacy or transmission ownership contracts which will continue to receive their full congestion hedge allocation.

As noted above, the MSC expressed a range of reservations about the enhancement proposed in this tariff amendment filing without opposing moving forward. The CAISO does not take the MSC's reservations lightly and appreciates their emphasis on conducting further analysis and proceeding with all due caution. The CAISO will follow the MSC's guidance and proceed accordingly, which is to follow the conclusion that the DMM and the WEM Governing Body market expert reached based on the information available at this time. Namely, it is just and reasonable to proceed with EDAM under the transitional measures the CAISO proposes herein and realize expected benefits of EDAM while working toward a long-term design.

In considering the concerns raised by the MSC, it is important to note the magnitude of change from the current practice, whereby transmission customers in neighboring balancing areas do not bear the costs of any congestion their

schedules cause in other balancing areas. The abruptness of the change in this longstanding paradigm to the approved design, whereby the costs associated with congestion in neighboring balancing areas caused by constraints in the other participating balancing area now would be allocated to that balancing area, clearly raised serious concerns among a large number of stakeholders. The CAISO believes alleviating these concerns, ensuring a smooth transition to EDAM, and promoting greater EDAM participation is a significant net positive for customers in the West. Further, the CAISO is committed to following up on each of the MSC's recommendations, including carefully analyzing the requested information, developing mitigation measures prior to go-live as may be appropriate, and reporting on any findings and recommendations that may follow.

Overall, the MSC's most significant reservation is that modifying the approved congestion revenue allocation will create incentives that reduce market efficiency. The CAISO, in the abstract, does not necessarily disagree with the MSC's view; however, the transition from bilateral day-ahead markets to an organized day-ahead market that rests upon the continuation of long-standing OATT frameworks is a new framework and it will take time to work through identified and unknown challenges. Having actual information about EDAM operation is critical to understanding the next best steps to take in the evolution of EDAM. The CAISO believes it is best to move forward with its transitional proposal, gather actual operational data, monitor impacts, and continue its efforts to develop near-term and long-term solutions that better address the MSC's identified concerns. Moreover, stakeholders broadly agree and support this general direction.

One of the MSC's specific concerns is that the modified congestion revenue allocation proposal will create prevalent self-scheduling incentives. Self-scheduling would protect balanced day-ahead self-schedules from congestion cost exposure and, as a result, it would inject a consideration into the decision of whether to self-schedule or economically bid not present in an organized market with financial rights separated from transmission use. Again, the CAISO does not disagree this incentive exists, particularly for transmission customers scheduling transactions serving demand external to the balancing area. However, from an EDAM load-serving entity perspective, economic bidding of designated resources will allow the market to serve the demand with the least-cost resource and avoid running contracted higher-cost resources in those intervals. This should reduce the overall cost of serving load and would thus be considered by the load-serving entity in determining how to schedule its resources. Moreover, through the two-step sub-allocation proposals contained in the pending OATT amendments of PacifiCorp and PGE, the load-serving entity would be allocated congestion revenues to offset their congestion cost exposure when they economically bid their resources. In other words, it is unclear that the incentive to directly capture congestion revenue through the submission of a self-schedule will outweigh the benefit of economic bidding and recovering

congestion revenue through the sub-allocation amounts paid to measured demand under the pending OATTs. The CAISO believes under most conditions the incentives for load-serving entities will weigh in favor of economic participation.[98] In addition, the CAISO has publicly confirmed and reaffirms here its commitment to gather the information available sought by the MSC to assess the potential magnitude of its self-scheduling concern prior to implementation and report that information out for the MSC to consider. The CAISO will also reflect carefully on all available information prior to EDAM implementation and assess what measures may be necessary to mitigate potential adverse outcomes in the event self-scheduling becomes much more prevalent than anticipated.

The WEM Governing Body market expert, Susan Pope, shares the concerns of the MSC and others about self-scheduling incentives.[99] The concern is there could be periods of high parallel flow congestion costs for CAISO constraints that would put political and regulatory pressure on PacifiCorp to self-schedule its OATT network resources so its network customers would not pay CAISO parallel flow congestion costs. In her view, this may be the reality despite the representations of PacifiCorp and the CAISO assessment that that elective self-scheduling of monthly and yearly firm OATT service may not cause large market distortions during the initial operation of EDAM. Because a cascade of self-scheduling has the potential to significantly erode the benefits of EDAM, she too urges caution and additional analysis, preparation, and intensified focus on the development and allocation of financial flow entitlements for major EDAM transmission constraints.[100] Again, the CAISO is committed to conducting this analysis, considering mitigation measures prior to go-live, and evaluating further enhancements based on operational experience.

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[98] PacifiCorp confirms this is its view as well, stating that while "some have raised concerns with the proposed design, such as the potential incentive for self-scheduling, PacifiCorp believes the concerns do not outweigh the improved design in the Final Proposal." *Letter from PacifiCorp to the CAISO Governing Board and WEM Governing Body*, June 13, 2025, page 1, available at: https://www.caiso.com/documents/pacificorp-public-comment-letter-decision-on-edam-congestion-revenue-allocation-june-2025.pdf. PacifiCorp goes on to explain "the perspective of PacifiCorp's merchant function is that the potential incentive is likely not as significant as some have stated. Numerous studies have shown that the majority of EDAM benefits come from the market optimally scheduling resources across the market footprint, which lowers wholesale electricity costs for consumers. Self-scheduling resources, which removes resource capacity that can be optimally scheduled, will significantly reduce the benefits the EDAM can provide to EDAM entities. PacifiCorp's merchant function believes the risk of a reduction in benefits due to self-scheduling is greater than the risk of lower benefits due to receiving insufficient congestion revenues to cover the costs of congestion. As such, PacifiCorp's merchant function intends to participate in the EDAM by bidding in its resources to allow the market to optimally meet PacifiCorp's load as dictated by operational concerns at the time." *Id.*

[99] WEM-Governing-Body-Market-Expert-Opinon-on-Extended-Day-Ahead-Market-Congestion-Revenue-Allocation-Jun-18-2025.pdf.

[100] *See id.* at 24-25.

The MSC also supports exploring a long-term solution including financial rights and, in the alternative, some kind of negotiated division of flow entitlements over a set of transmission constraints that are anticipated to be most impacted by parallel flows. As part of stakeholder discussions on a durable long-term approach to parallel flow congestion issues, the CAISO will consider financial rights and potential flow entitlements between balancing areas, which would not be based on the timing of transmission service arrangements but instead based on a more pragmatic historical physical flow evaluation and basis for congestion revenue allocation. The CAISO commits to obtaining MSC input on all potential near-term and long-term congestion revenue allocation changes.[101]

As noted above, a key area of stakeholder emphasis was the need to establish a plan for continued engagement and transition to a long-term durable design on a defined timeline. Stakeholders stated the CAISO should ensure there is a forum for consideration of a long-term design for congestion revenue allocation as the EDAM footprint grows. To that end, the CAISO committed to promptly re-engage with stakeholders in working groups later in 2025 to discuss both the near-term and long-term EDAM design enhancements as described further below.[102]

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[101] One other notable aspect of the MSC Opinion is the recognition that any attempt to expand "carve-outs" of transmission capacity from the market beyond the limited circumstances specified in an EDAM transmission service provider's tariff would introduce substantial inefficiencies and undercut the fundamentals of the EDAM design. *See* MSC Opinion at 29-30. The limited carve-out authority contained in CAISO Tariff section 33.18.3.3 is not addressed in this filing. The Commission should reject any attempts by commenters to introduce this out-of-scope issue in this proceeding and should instead address it in the separate PacifiCorp and PGE proceedings (Docket Nos. ER25-951 and ER25-1868, respectively). The explanation provided by the MSC further highlights why the Commission should not entertain a broader carve-out from EDAM for customers with firm OATT rights. Under section 205 of the FPA, the Commission limits its evaluation of a utility's proposed tariff revisions to an inquiry into "whether the rates proposed by a utility are reasonable – and not to extend to determining whether a proposed rate schedule is more or less reasonable to alternative rate designs." *Cal. Indep. Sys. Operator Corp.*, 141 FERC ¶ 61,135, at P 44 n.43 (2012) (quoting *City of Bethany v. FERC*, 727 F.2d 1131, 1136 (D.C. Cir. 1984)). In that same order, the Commission also explained that the revisions proposed by the utility "need not be the only reasonable methodology" and that "even if an intervenor develops an alternative proposal, the Commission must accept a section 205 filing if it is just and reasonable, regardless of the merits of the alternative proposal." 141 FERC ¶ 61,135, at P 44 n.43 (citing federal court and Commission precedent). *See also New Eng. Power Co.*, 52 FERC ¶ 61,090, at 61,336 (1990), *aff'd sub nom. Town of Norwood v. FERC*, 962 F.2d 20 (D.C. Cir. 1992) (proposed rate design need not be perfect, it merely needs to be just and reasonable); *Louisville Gas & Elec. Co.*, 114 FERC ¶ 61,282, at P 29 (2006) (the just and reasonable standard under the FPA is not so rigid as to limit rates to a "best rate" or "most efficient rate" standard, but rather a range of different approaches often may be just and reasonable). Therefore, "[u]pon finding that CAISO's Proposal is just and reasonable, [the Commission] need not consider the merits of alternative proposals." *Cal. Indep. Sys. Operator Corp.*, 141 FERC ¶ 61,135, at P 44. In this case, the Commission need not weigh the CAISO's proposed tariff amendment against any alternatives supported by any other party.

[102] *See infra* section IV.

IV. CAISO Plans for Future Near-Term and Long-Term Stakeholder Engagement

For the reasons explained above, the CAISO Tariff revisions proposed in this filing are just and reasonable. These tariff revisions will provide a baseline transitional approach to congestion revenue allocation for use at the start of EDAM, which the CAISO will build upon through continued stakeholder engagement to explore further enhancements to be filed and implemented after EDAM goes live. This approach is comparable to the approach the CAISO has taken with other tariff enhancements, and this approach is consistent with stakeholder expectations generally concerning EDAM.[103]

The CAISO is committed to an ongoing and thorough engagement with stakeholders to evolve the EDAM congestion revenue allocation design. To that end, the CAISO will engage with stakeholders throughout market simulation and parallel operations. In the fall of 2025, prior to implementing EDAM in May 2026, the CAISO will reinitiate working groups to explore both the development of near-term enhancements and the development of a long-term, durable design for allocating congestion revenue. These efforts will explore market mechanisms that allow market participants to hedge congestion costs, informed by actual operational experience with EDAM including the modification proposed in this amendment. These planned efforts are consistent with the CAISO's history with the WEIM, for which the CAISO proposed enhancements to the approved and just and reasonable WEIM design both before and after WEIM implementation.[104] The CAISO provides an overview in this section of its plans for near-term and

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[103] For example, the Commission accepted CAISO Tariff amendments to implement an interim capacity procurement mechanism (ICPM) effective as of the date the tariff for the CAISO's Market Redesign and Technology Upgrade (MRTU) initiative was to go into effect. *See Cal. Indep. Sys. Operator Corp.*, 125 FERC ¶ 61,053 (2008), *order on reh'g*, 134 FERC ¶ 61,132 (2011). The CAISO filed the ICPM amendments with the express plan to replace them after MRTU go-live with tariff revisions to implement a permanent capacity procurement mechanism (CPM). Accordingly, after the MRTU tariff went into effect in 2009, the CAISO filed tariff amendments to implement the CPM design. *See Cal. Indep. Sys. Operator Corp.*, 134 FERC ¶ 61,211 (2011) (accepting and suspending certain features of proposed CPM design subject to the outcome of a technical conference). The Commission ultimately accepted the CPM design in an order on uncontested settlement. *See Cal. Indep. Sys. Operator Corp.*, 138 FERC ¶ 61,112 (2012). The CPM remains in effect today. *See generally* CAISO Tariff section 43A *et seq.*

[104] In 2014, the Commission accepted the CAISO's proposed revisions to its tariff to implement the WEIM design later that year. *See Cal. Indep. Sys. Operator Corp.*, 147 FERC ¶ 61,231, *order on reh'g, clarification, & compliance*, 149 FERC ¶ 61,058. Before the CAISO implemented the WEIM on November 1, 2024, it filed and the Commission accepted certain tariff enhancements to the design. *See Cal. Indep. Sys. Operator Corp.*, 148 FERC ¶ 61,222 (2014). The CAISO also filed and the Commission accepted tariff enhancements to the WEIM design based on experience with the initial implementation. *See Cal. Indep. Sys. Operator Corp.*, 150 FERC ¶ 61,185 (2015); *Cal. Indep. Sys. Operator Corp.*, 153 FERC ¶ 61,087 (2015).

long-term engagement with stakeholders solely for the information of the Commission and interested parties.[105]

The CAISO has already begun planning steps to start a stakeholder process in the fall of 2025 to further consider and develop near-term enhancements as appropriate. The CAISO plans to present them for CAISO Governing Board and WEM Governing Body approval within the first year of EDAM operations, assuming the appropriate level of support by stakeholders and further analysis, so they can be filed for Commission acceptance and implemented shortly thereafter—*i.e.*, in 2027.

In the long term, the CAISO and stakeholders will consider a variety of potential enhancements over the 12-24 months after EDAM goes live. This intensive effort will include review of EDAM principles and consideration of any new or additional principles guiding the establishment of a potential long-term design for allocating congestion revenue and for market mechanisms that allow market participants to hedge congestion costs. An important aspect of the long-term evolution of the EDAM design will be monitoring how the congestion revenue allocation methodology affects EDAM balancing areas and the CAISO balancing area. This insight will help guide future enhancements and shape a lasting design.

During the first 12-24 months after EDAM is implemented, the CAISO will provide quarterly updates to the CAISO Governing Board and the WEM Governing Body on the status of the short-term and long-term stakeholder initiatives, data and metrics gleaned from monitoring the congestion data, and timelines for implementing the various design options under consideration. After this 24-month period ends, the CAISO plans to present any final long-term proposal for CAISO Governing Board and WEM Governing Body approval. The CAISO would then file the approved proposal with the Commission with the goal of implementing it in the third year of EDAM operations—*i.e.*, in 2028 or 2029.

Also, the DMM will monitor for and provide data and information on EDAM operations, in addition to and independent from the CAISO's monitoring and reporting. As with the data and reporting it already produces for the WEIM, the DMM will monitor aspects of EDAM congestion that will be part of its quarterly and annual reports,[106] which will provide further transparency to congestion-related information. Finally, the CAISO commits to submitting an informational

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[105] Additional information regarding these near-term and long-term enhancements is provided at pages 28-33 of the Final Proposal. Although the CAISO does not currently have any reason to expect these plans for near-term and long-term enhancements will change, the CAISO might modify the substance and timing of the enhancements as may be appropriate based on future and unknown circumstances.

[106] *See* https://www.caiso.com/market-operations/market-monitoring.

report to the Commission prior to EDAM implementation concerning the information gathered from parallel operations, if directed to do so, and to follow up and file a report every six months following EDAM implementation until a long-term solution is developed whereby the submission of additional reports is no longer useful.

V. Effective Date and Request for Waiver of Notice Requirement

The CAISO respectfully requests that the Commission accept the tariff revisions contained in this filing effective as of the actual implementation date of EDAM, which the CAISO currently expects will be May 1, 2026. To permit this effective date, the CAISO requests that the Commission grant waiver of its notice requirement.[107]

Good cause exists to grant the requested waiver, because granting it will allow the tariff amendment to go into effect at the same time as the other provisions of the CAISO Tariff the Commission approved to go into effect on the actual EDAM implementation date.[108] As with those other tariff provisions, the CAISO proposes to notify the Commission of the actual EDAM implementation date (*i.e.*, the effective date of the instant tariff amendment) within five business days after EDAM go-live occurs.[109]

To provide certainty to the CAISO and its stakeholders on an issue of considerable stakeholder interest, and thereby facilitate timely implementation of EDAM, the CAISO respectfully requests the Commission issue an order on this filing by September 18, 2025.

VI. Communications

Under Rule 203(b)(3),[110] the CAISO respectfully requests that all correspondence and other communications regarding this filing should be directed to:

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[107] Specifically, pursuant to section 35.11 of the Commission's regulations, 18 C.F.R. § 35.11, the CAISO respectfully requests waiver of the notice requirement contained in section 35.3(a)(1) of the Commission's regulations, 18 C.F.R. § 35.3(a)(1), to allow this tariff amendment to go into effect more than 120 days after the submittal of this filing.

[108] *See* EDAM Acceptance Order at P 2 and Ordering Paragraph (B).

[109] *See id.* at P 2 and Ordering Paragraph (C). The CAISO will file the notification in an eTariff submittal using Type of Filing Code 150 – Report. *See id.* at Ordering Paragraph (C).

[110] 18 C.F.R. § 385.203(b)(3).

Sean A. Atkins
Bradley R. Miliauskas
Davis Wright Tremaine LLP
1301 K Street, NW
Suite 500 East
Washington, DC 20005
Tel: (202) 973-4200
seanatkins@dwt.com
bradleymiliauskas@dwt.com

John C. Anders
Deputy General Counsel
Anthony J. Ivancovich
Deputy General Counsel
California Independent System Operator Corporation
250 Outcropping Way
Folsom, CA 95630
Tel: (916) 608-7287
janders@caiso.com
aivancovich@caiso.com

VII. Service

The CAISO has served copies of this filing on the California Public Utilities Commission, the California Energy Commission, and all parties with scheduling coordinator agreements under the CAISO Tariff. In addition, the CAISO has posted a copy of the filing on the CAISO website.

VIII. Contents of this Filing

Besides this transmittal letter, this filing includes the following attachments:

Attachment A	Clean CAISO Tariff sheets to implement this tariff amendment
Attachment B	Red-lined CAISO Tariff sheets to implement this tariff amendment
Attachment C	Final Proposal
Attachment D	Memorandum

IX. Conclusion

For the reasons set forth in this filing, the CAISO respectfully requests that the Commission issue an order by September 18, 2025, accepting this CAISO Tariff amendment effective as of the actual implementation date of EDAM.

Respectfully submitted,

/s/ John C. Anders
Roger E. Collanton
General Counsel
John C. Anders
Deputy General Counsel
Anthony J. Ivancovich
Deputy General Counsel

Counsel for the California Independent System Operator Corporation

Attachment A – Clean Tariff

Tariff Amendment – EDAM Congestion Revenue Allocation

California Independent System Operator Corporation

June 26, 2025

11.2.4 CRR Settlements

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11.2.4.1.2 Calculation of Hourly CRR Congestion Fund

The CAISO calculates an Hourly CRR Congestion Fund for every Transmission Constraint that is congested in the IFM in a Settlement Period. The Hourly CRR Congestion Fund specific to a particular binding Transmission Constraint in a given Settlement Period is the sum of the: (a) portion of the IFM Congestion Charge in that Settlement Period attributable to congestion on the Transmission Constraint to which the Hourly CRR Congestion Fund corresponds; (b) charges specific to the Transmission Constraint calculated pursuant to Section 11.2.4.4.1; and (c) CRR revenue adjustments the CAISO may make pursuant to Sections 11.2.4.6 or 11.2.4.7 that are associated with the Transmission Constraint. Part (a) does not include funds needed to make a Congestion difference allocation to an EDAM Entity Balancing Authority Area as specified in Section 33.11.1.2.1.

* * * * *

33.11 Settlements And Billing for EDAM Market Participants

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33.11.1.2 Congestion Revenue

The CAISO will collect Congestion revenue based on price differences in the Marginal Cost of Congestion of the LMP across PNodes within the EDAM Area. For each Settlement Period of the DAM, the CAISO will calculate the contribution of each Balancing Authority Area in the EDAM Area to the Marginal Cost of Congestion at each resource location and intertie in the EDAM Area for each Balancing Authority Area based on the location of the Transmission Constraints in each Balancing Authority Area, EDAM Interties, and constraints enforced outside of the EDAM Area

needed to manage that Balancing Authority Area's responsibilities. The CAISO will distribute the Congestion Charge revenue collected from the Transmission Constraints in each Balancing Authority Area in the EDAM Area to the applicable Balancing Authority Area within which the Congestion occurred, following any adjustment for (a) the CAISO Balancing Authority Area in accordance with Section 11 and EDAM Entity Balancing Authority Areas to account for schedules associated with EDAM Legacy Contracts, EDAM Transmission Ownership Rights and registered EDAM Transmission Service Provider transmission customer rights under Sections 33.16, 33.17, and 33.18, respectively, and (b) the Marginal Cost of Congestion difference between nodes within an EDAM Balancing Authority Area that result from Transmission Constraints in a Balancing Authority Area in the EDAM Area outside of that EDAM Balancing Authority Area and are associated with registered, qualified and balanced Day-Ahead Self-Schedules under Section 33.11.1.2.1. An EDAM Entity will ensure that Congestion revenue allocated to its EDAM Entity Scheduling Coordinator is further allocated by all applicable EDAM Transmission Service Providers as may be detailed in the EDAM Transmission Service Provider tariff and business practices. Congestion revenue allocated to the CAISO Balancing Authority Area will be further allocated according to the CAISO Tariff, including Section 11.2.1 and Section 11.2.4.

33.11.1.2.1 EDAM Entity Balancing Authority Area MCC Adjustment

For each Settlement Period of the DAM, the CAISO will determine through calculations detailed in the Business Practice Manual for Settlements and Billing the Congestion difference within the EDAM Area from the contribution of qualified and balanced Day-Ahead Self-Schedules registered by the EDAM Entity in each EDAM Entity Balancing Authority Area to the Marginal Cost of Congestion at each resource location and intertie in the EDAM Area. This Congestion difference will be allocated to the EDAM Entity Balancing Authority Area where the qualified and balanced Day-Ahead Self-Schedule is associated for sub-allocation as required by Section 33.11.1.2. Qualification for this adjustment will be afforded to eligible long-term firm and monthly firm point-to-point and network integration transmission service rights, including conditional firm, as defined under the EDAM Transmission Service Provider tariff (with shorter-term rights being

ineligible for this treatment). Registration of qualified transmission service rights will occur through the procedures described in Section 33.18.3 and result in a CRN to facilitate this adjustment. A Day-Ahead Self Schedule will be considered balanced for purposes of this adjustment in accordance with the provisions of Section 33.16 applicable to the determination of whether an EDAM Legacy Contract is balanced in the DAM.

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33.11.3 Day-Ahead Market Settlement

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33.11.3.9.3 Marginal Congestion Offset

The CAISO will calculate an hourly Day-Ahead marginal Congestion offset revenue for each EDAM Entity Balancing Authority Area. The hourly Day-Ahead marginal Congestion offset revenue will equal the sum of the product of Day-Ahead Energy Schedules, including Schedules for Virtual Awards and Energy transfer Schedules, and the Marginal Cost of Congestion contribution for each EDAM Entity Balancing Authority Area at its relevant pricing location and considering relevant intertie Transmission Constraints. The hourly Day-Ahead Congestion revenue amount will also account for any EDAM Legacy Contracts and EDAM Transmission Ownership Rights marginal Congestion adjustment amounts and any adjustment amounts for Congestion revenue under Section 33.11.1.2.1. The CAISO will allocate the hourly Day-Ahead marginal Congestion revenue amount to each EDAM Entity and the hourly Day-Ahead marginal Congestion revenue amount allocated to the CAISO Balancing Authority Area will be distributed first to CRRs and then to any surplus allocated to Measured Demand per the CAISO Tariff.

Attachment B – Marked Tariff

Tariff Amendment – EDAM Congestion Revenue Allocation

California Independent System Operator Corporation

June 26, 2025

11.2.4 CRR Settlements

* * * * *

11.2.4.1.2 Calculation of Hourly CRR Congestion Fund

The CAISO calculates an Hourly CRR Congestion Fund for every Transmission Constraint that is congested in the IFM in a Settlement Period. The Hourly CRR Congestion Fund specific to a particular binding Transmission Constraint in a given Settlement Period is the sum of the: (a) portion of the IFM Congestion Charge in that Settlement Period attributable to congestion on the Transmission Constraint to which the Hourly CRR Congestion Fund corresponds; (b) charges specific to the Transmission Constraint calculated pursuant to Section 11.2.4.4.1; and (c) CRR revenue adjustments the CAISO may make pursuant to Sections 11.2.4.6 or 11.2.4.7 that are associated with the Transmission Constraint. Part (a) does not include funds needed to make a Congestion difference allocation to an EDAM Entity Balancing Authority Area as specified in Section 33.11.1.2.1.

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33.11 Settlements And Billing for EDAM Market Participants

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33.11.1 Transfer Revenue and Congestion Revenue Allocation

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33.11.1.2 Congestion Revenue

The CAISO will collect Congestion revenue based on price differences in the Marginal Cost of Congestion of the LMP across PNodes within the EDAM Area. For each Settlement Period of the DAM, the CAISO will calculate the contribution of each Balancing Authority Area in the EDAM

Area to the Marginal Cost of Congestion at each resource location and intertie in the EDAM Area for each Balancing Authority Area based on the location of the Transmission Constraints in each Balancing Authority Area, EDAM Interties, and constraints enforced outside of the EDAM Area needed to manage that Balancing Authority Area's responsibilities. The CAISO will distribute the Congestion Charge revenue collected from the Transmission Constraints in each Balancing Authority Area in the EDAM Area to the applicable Balancing Authority Area within which the Congestion occurred, ~~includ~~following any adjustment for (a) the CAISO Balancing Authority Area in accordance with Section 11 and ~~any adjustment for~~ EDAM Entity Balancing Authority Areas to account for schedules associated with EDAM Legacy Contracts, EDAM Transmission Ownership Rights and registered EDAM Transmission Service Provider transmission customer rights under Sections 33.16, 33.17, and 33.18, respectively, and (b) the Marginal Cost of Congestion difference between nodes within an EDAM Balancing Authority Area that result from Transmission Constraints in a Balancing Authority Area in the EDAM Area outside of that EDAM Balancing Authority Area and are associated with registered, qualified and balanced Day-Ahead Self-Schedules under Section 33.11.1.2.1 ~~to the applicable Balancing Authority Area within which the Congestion occurred~~. An EDAM Entity will ensure that Congestion revenue allocated to its EDAM Entity Scheduling Coordinator is further allocated by all applicable EDAM Transmission Service Providers as may be detailed in the EDAM Transmission Service Provider tariff and business practices. Congestion revenue allocated to the CAISO Balancing Authority Area will be further allocated according to the CAISO Tariff, including Section 11.2.1 and Section 11.2.4.

33.11.1.2.1 EDAM Entity Balancing Authority Area MCC Adjustment

For each Settlement Period of the DAM, the CAISO will determine through calculations detailed in the Business Practice Manual for Settlements and Billing the Congestion difference within the EDAM Area from the contribution of qualified and balanced Day-Ahead Self-Schedules registered by the EDAM Entity in each EDAM Entity Balancing Authority Area to the Marginal Cost of Congestion at each resource location and intertie in the EDAM Area. This Congestion difference will be allocated to the EDAM Entity Balancing Authority Area where the qualified and balanced Day-Ahead Self-Schedule is

associated for sub-allocation as required by Section 33.11.1.2. Qualification for this adjustment will be afforded to eligible long-term firm and monthly firm point-to-point and network integration transmission service rights, including conditional firm, as defined under the EDAM Transmission Service Provider tariff (with shorter-term rights being ineligible for this treatment). Registration of qualified transmission service rights will occur through the procedures described in Section 33.18.3 and result in a CRN to facilitate this adjustment. A Day-Ahead Self Schedule will be considered balanced for purposes of this adjustment in accordance with the provisions of Section 33.16 applicable to the determination of whether an EDAM Legacy Contract is balanced in the DAM.

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33.11.3 Day-Ahead Market Settlement

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33.11.3.9.3 Marginal Congestion Offset

The CAISO will calculate an hourly Day-Ahead marginal Congestion offset revenue for each EDAM Entity Balancing Authority Area. The hourly Day-Ahead marginal Congestion offset revenue will equal the sum of the product of Day-Ahead Energy Schedules, including Schedules for Virtual Awards and Energy transfer Schedules, and the Marginal Cost of Congestion contribution for each EDAM Entity Balancing Authority Area at its relevant pricing location and considering relevant intertie Transmission Constraints. The hourly Day-Ahead Congestion revenue amount will also account for any EDAM Legacy Contracts and EDAM Transmission Ownership Rights marginal Congestion adjustment amounts and any adjustment amounts for Congestion revenue under Section 33.11.1.2.1. The CAISO will allocate the hourly Day-Ahead marginal Congestion revenue amount to each EDAM Entity and the hourly Day-Ahead marginal

Congestion revenue amount allocated to the CAISO Balancing Authority Area will be distributed first to CRRs and then to any surplus allocated to Measured Demand per the CAISO Tariff.

Attachment C – Final Proposal

Tariff Amendment – EDAM Congestion Revenue Allocation

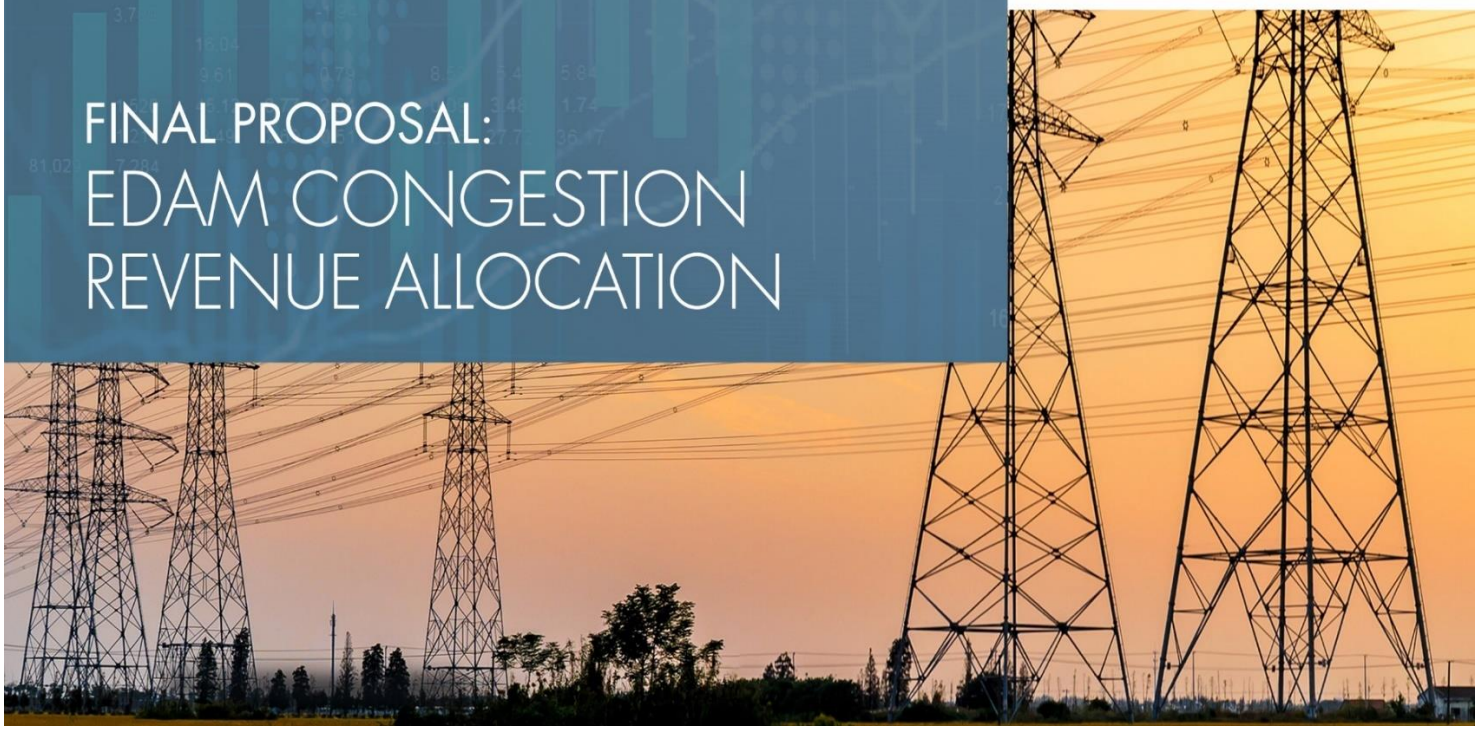
California Independent System Operator Corporation

June 26, 2025

California ISO

EDAM
EXTENDED DAY-AHEAD MARKET

FINAL PROPOSAL:
EDAM CONGESTION REVENUE ALLOCATION



June 6, 2025

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Table of Contents

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I. Executive Summary

Following an expedited stakeholder process, the ISO proposes transitional changes to how congestion revenues are allocated among balancing areas participating in the Extended Day-Ahead Market (EDAM). This initiative addresses a concern raised during PacifiCorp's tariff revision process to implement EDAM that is best addressed by the ISO considering a transitional solution in lieu of the previously FERC-approved EDAM design. Specifically, the concern is that EDAM balancing areas may not be allocated congestion revenues to provide a sufficient hedge for congestion costs for transmission customers exercising their firm point-to-point transmission rights reserved under the Open Access Transmission Tariff (OATT).

The proposed transitional change would, under limited circumstances, allocate a portion of day-ahead parallel flow congestion revenues to the EDAM balancing area where market participants have paid prices that include those congestion costs, rather than to the balancing area where the constraint occurs. In markets that span multiple balancing authority areas, a transmission constraint in one area can impact prices in another, resulting in "parallel flow" congestion revenue. The EDAM balancing area receiving the parallel flow congestion revenue can use it to manage the cost of congestion for those transmission customers exercising their eligible firm transmission rights.

The proposal includes a commitment to monitor the performance and impacts of this transitional change. It outlines the specific congestion-related metrics that the ISO will monitor and how it will share that information with stakeholders. The ISO will initiate the next phase of stakeholder processes ahead of EDAM's launch in 2026 to explore near-term enhancements and a long-term design for congestion revenue allocation.

The near-term enhancements will focus on: (1) addressing the limited applicability of this approach to participants that, among other criteria, self-schedule their resources in the market, and (2) developing a treatment for congestion revenue rights (CRR) within the CAISO balancing area that is comparable to the treatment afforded to OATT transmission rights. The long-term design discussion will take a more comprehensive look at how congestion revenues are allocated across the EDAM market footprint, with the goal of delivering a recommendation within 12 to 24 months.

This proposed change to congestion revenue allocation is a necessary transitional measure for EDAM and how congestion revenues are allocated to an EDAM entity, aimed at supporting transmission customers exercising their OATT transmission rights in delivering power without facing congestion cost risks they cannot effectively hedge. The proposed change directly advances the transition to EDAM, which will enable more effective and efficient dispatch solutions and delivers benefits to all EDAM participants.

II. Overview of Proposed Design

This Final Proposal is the product of multiple proposal iterations and has been shaped by stakeholder comments and input throughout the various stages of the initiative. While the proposed design change focuses on congestion revenue allocation associated with parallel flows, the following description provides a comprehensive overview of the overall EDAM design for congestion revenue allocation:

- **Internal Congestion Revenue:** An EDAM balancing area will continue to be allocated internal day-ahead congestion revenues collected from binding transmission constraints within its balancing area, consistent with the current FERC-approved design.
- **Parallel Flow Congestion Revenues (proposal for this initiative):** The market operator will allocate day-ahead congestion revenues associated with parallel flows to the EDAM balancing area where the congestion revenues are collected, not only to where the transmission constraint is located. The amount allocated will be commensurate with the parallel flow related congestion costs of balanced self-schedules associated with eligible firm point-to-point (PTP), including conditional firm, and network integration transmission service (NITS) transmission rights under the OATT, defined by registered contract reference numbers (CRN) in the ISO Masterfile. These revenues are further sub-allocated to transmission customers by the EDAM entity under the terms of its OATT.
- **Remaining Parallel Flow Congestion Revenues:** The market operator will allocate any remaining day-ahead congestion revenues associated with parallel flows to the EDAM balancing area where the transmission constraint is located, like the current FERC-approved design.

This targeted change to the congestion revenue allocation between participating balancing areas addresses concerns with the ability to hedge congestion associated with parallel flows to ensure a just and reasonable outcome prior to EDAM go-live in 2026.

It is important to note that this proposal is not precisely mirrored for the CAISO balancing area because the CAISO does not offer firm PTP and NITS transmission products within its balancing area. The ISO administers congestion revenue rights (CRR), which are financial instruments used to hedge against congestion in the day-ahead market. Under this proposal the CAISO balancing area may not be allocated congestion revenues associated with parallel flows arising from constraints in a neighboring EDAM balancing area. However, the CAISO balancing area will collect remaining congestion revenues (described above) associated with parallel flows stemming from a constraint within the CAISO balancing area.

These congestion revenues are incremental to what the CAISO receives today and will support funding of CRRs in the CAISO balancing area. Moreover, to mitigate CRR funding risks generally with the onset of EDAM, the ISO will explore CRR modeling practices that consider transmission uses in neighboring EDAM areas, which can further improve the accuracy of CRR awards and reduce the risk of releasing CRRs that are predominantly impacted by parallel flow effects.

The allocation of congestion revenues associated with parallel flows, as described in this proposal, would apply in the day-ahead market only. The method for allocating congestion revenues in the WEIM, the real-time market, remains unaffected by this proposed design.

The ISO will also continue to pursue near-term enhancements to the design that it can implement within, or soon after, the first year of EDAM operations in 2027. The ISO will re-initiate stakeholder working groups prior to launching EDAM to develop the design, and it will move to implement an enhancement to enable allocation of congestion revenues associated with parallel flow commensurate with economically bid cleared balanced market schedules associated with registered eligible firm PTP and NITS OATT transmission rights. In particular, the key elements of this near-term enhancement, which builds on the current proposal, would consist of:

- **Allocation of Congestion Revenue Associated with Parallel Flow:** Congestion revenues associated with parallel flow will be allocated by the market operator to the EDAM balancing area where the congestion revenues are collected (not where the transmission constraint is located) for the exercise of eligible firm PTP and NITS OATT transmission rights for cleared balanced day-ahead market schedules, *whether self-scheduled or economically bid*. This enhancement reduces or mitigates concerns with incentives to self-schedule in the day-ahead market.
- **CAISO Balancing Area**: For the CAISO balancing area, the market operator will enhance the CRR and settlement functionality to allocate to the CAISO balancing area congestion revenues associated with parallel flow, resulting from a binding constraint in a neighboring EDAM balancing area, based on the settlement of source/sink CRRs released in the annual and monthly allocation and auction processes.

The proposal further reflects and describes the ISO's commitment to continued stakeholder engagement on an expedient timeline to evaluate and develop a long-term durable design to congestion revenue allocation. The ISO proposes the following activities and timelines to support continued engagement:

- **Stakeholder working groups launching in Spring 2026 prior to EDAM go-live**. The working groups would evaluate near-term enhancements and a focus on long-term design, evaluating a spectrum of alternatives and consideration of long-term design principles.
- **Stakeholder process lasting 12 to 24 months to evaluate long-term design.** The stakeholder process evaluating a long-term durable design would be conducted across a 12 to 24 month period to allow time for robust discussion and consideration of a spectrum of designs. By the conclusion of this stakeholder process, the ISO will present a formal proposal to the governing entity for consideration. The ISO will provide quarterly updates to the ISO Board of Governors and the WEM Governing Body on the status of the initiative, implementation timelines associated with designs considered, and reporting on data monitoring related to congestion within the EDAM footprint.
- **Implementation in third year of EDAM operations.** To the extent a proposal is approved, the ISO would file the supportive tariff revisions and will strive to implement the design within the third year of EDAM operations, considering the structure and complexity of the approved design.

III. Proposal Changes from Revised Draft Final Proposal to Final Proposal

This Final Proposal makes no further changes to the substantive proposal as compared to the Revised Draft Final Proposal. However, the Final Proposal responds to stakeholder comments and provides necessary clarifications:

- Clarification that the congestion revenue allocation methodology does not change for Transmission Ownership Rights (TOR)/Existing Transmission Contracts (ETC) or otherwise known as legacy transmission contracts (pre-OATT contracts). Transmission customer exercising these transmission rights will continue to receive a direct congestion hedge allocation from the market operator. This is further described in section VIII.A(b).
- Further clarification based on stakeholder comments that as part of data monitoring related to the proposal, the ISO will seek to coordinate with EDAM entities to obtain and share data on the frequency of self-scheduling associated with the exercise specifically of NITS and PTP transmission rights. This is further recognized in section VIII.B(a).

IV. Introduction

The EDAM design overlays an organized market structure with the OATT contract-path frameworks prevalent across the West. Like the WEIM today, participating balancing authority areas in EDAM retain key roles and functions: administration of their OATT, transmission planning, resource planning, and reliability management. The transmission service provider(s) within the balancing area continue to administer their OATT and continue to make sales of transmission service within their service territory, while the market seeks to optimize the resource and transmission capabilities of the grid to provide economic, reliability, and environmental benefits.

Under the EDAM design, all resources in the balancing area will submit schedules into the market whether economically bidding or self-scheduling generator output. Similarly, the full transmission system capability is modeled in the FNM, along with transmission constraints that are represented in the market. An important feature of the market is that it can reflect these transmission constraints and seek to commit and dispatch resources in such a way as to avoid or ameliorate congestion that may be otherwise created by these transmission constraints. To the extent an internal transmission constraint binds in an EDAM balancing area, any resulting congestion revenues are allocated by the market operator to the EDAM balancing area where the constraint is located. This allocation method recognizes that the balancing area where the constraint is located bears the effects of the constraint and it is thus equitable for the resulting congestion revenues to flow to that balancing area to offset the cost effects of the constraint.

As discussed further below, based on modeled flows and the relationship between supply produced or demand consumed at a location, the flow effects on a transmission constraint referred to as the "shift-factor relationship" between pricing locations in the market and associated transmission constraints, generation in one EDAM area may contribute flow on a transmission constraint in an adjacent EDAM area as a result of parallel flows across interconnected systems. Conversely, a binding transmission

constraint in one area can have pricing effects on locations in neighboring EDAM areas. The EDAM design currently allocates congestion revenues associated with these parallel flows based on their contribution to the transmission constraint in the EDAM balancing authority area where the constraint is located rather than the balancing area in which the congestion revenue accrued, and the congestion price impact is reflected. This design for the allocation of congestion revenues associated with internal transmission constraints is in effect today, and has been for the last decade, in the WEIM.

PacifiCorp, as the first WEIM entity to extend participation to EDAM starting in 2026, has revised its OATT to support participation in EDAM and those revisions have been filed and are part of an ongoing proceeding at FERC. Commenters in the PacifiCorp OATT proceeding expressed concern with the EDAM design for congestion revenue allocation, in how the market operator allocates congestion revenues between EDAM balancing areas and the ability of an EDAM entity to consequently provide a sufficient congestion hedge for transmission customers exercising their transmission rights.

As part of its answer in the proceeding, the ISO committed to launching an expedited stakeholder initiative to create broader understanding of the existing FERC-approved EDAM design to congestion revenue allocation, and to consider other potential transitional mechanisms for congestion revenue allocation to EDAM balancing area recognizing parallel flow impacts and the desire from transmission customers to receive a more complete congestion hedge through the EDAM entity OATTs.

The ISO published an issue paper on March 17th commencing this initiative. This Final Proposal is shaped by extensive stakeholder written comments provided across multiple iterations of proposals and workshops to date.

A. What is congestion revenue?

In organized markets, locational marginal pricing is a mechanism used to reflect the value of electricity at different nodal locations across the market footprint, be it at load or generation locations. The resulting Locational Marginal Prices (LMP) are comprised of three components:

- Marginal Energy Component (MEC) – represents the system-wide clearing energy price.
- Marginal Congestion Component (MCC) – represents the cost of congestion at a given location (e.g. a node in the transmission system) when transmission elements (constraints) are congested.
- Marginal Losses Component (MLC) – represents costs associated with transmission line losses.

The LMPs vary by location across the grid – at generator and load pricing locations – driven in large part by the MCC component dependent upon the congestion across the market footprint as represented by transmission constraints that may be binding in the market. In effect, the congestion price at a pricing location reflects the total impact of congestion from the various transmission constraint at that given location.

Figure 1 illustrates the concept of price differences driven by transmission constraints between two price locations, a generator and a load location, representing $15 per MWh in congestion revenue that is allocated under market settlement mechanisms.

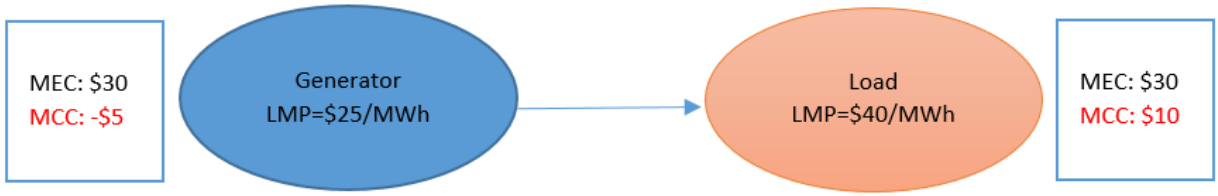


Figure 1: Congestion revenue accrual due to congestion on a system

Within a balancing area, there are many pricing locations representing load and generation, each one with its applicable LMP which includes a congestion component (MCC). Each of these locations can have a different LMP, even within the balancing area, driven by the extent of congestion experienced on binding transmission constraints on the grid.[1] Congestion revenues accrue when energy transactions are settled on the LMPs and there are price differences due to congestion (materializing in the MCC) between locations (e.g. between generation and load areas).

Similarly, within an integrated and interconnected market footprint, a transmission constraint in one balancing area can have a price effect at different pricing locations within a neighboring balancing area. The price impact reflects its contribution to congestion and is based on flow contributions from schedules at that location in relation to the constraint. Moreover, in an integrated market it is common that multiple transmission constraints across a larger and interconnected market footprint may be binding simultaneously, and thus the LMP MCC component at a particular pricing location may reflect the congestion cost associated with multiple transmission constraints based on flow contributions to that constraint. As a result, the LMP MCC can be decomposed into components reflecting the binding constraints based on the area in which the constraint is located. This decomposition approach has been used in the WEIM since its inception and enables the market operator to determine in which balancing area the congestion revenue is to be distributed.

B. What are "parallel flows"?

Parallel flow (also known as "loop flow" or "unscheduled flow") refers to the flow of electricity along the natural paths of least resistance on the interconnected transmission grid and across different balancing areas. The generation in one area can contribute to congestion in a neighboring area and this contribution may be reflected in the MCC component of the LMP at load and generation pricing locations across different balancing areas.

Parallel flows exist today across all interconnected transmission systems and have created or contributed to operational challenges across the West. Transmission Service Providers and grid operators deploy different strategies for managing and mitigating the effects of parallel flows. These strategies may be through their Available Transmission Capability (ATC) methodologies that seek to account for uncertainty associated with parallel flows, through different scheduling procedures that may seek to reduce transmission schedules contributing to parallel flows at specific system locations or other approaches including closer study and coordination between neighboring balancing authority areas.

[1] The MLC (associated with transmission losses) can also be a driving factor for price differences in the LMP, but the MCC component is generally the most variable and fluctuating element of the LMP based on the congestion conditions on the system.

Figure 2 below attempts to illustrate the effects of parallel flows between neighboring balancing areas. In the illustration, a transmission constraint materializes in BAA-A across path A-B. As a result of the constraint, energy may flow from A-C or B-D creating congestion in the C-D direction, potentially creating or contributing to constraint Y. In the organized market context, for example, the LMP at locations C and D may reflect in the MCC a congestion price reflective of its flow contributions to constraint X in the adjacent balancing area.

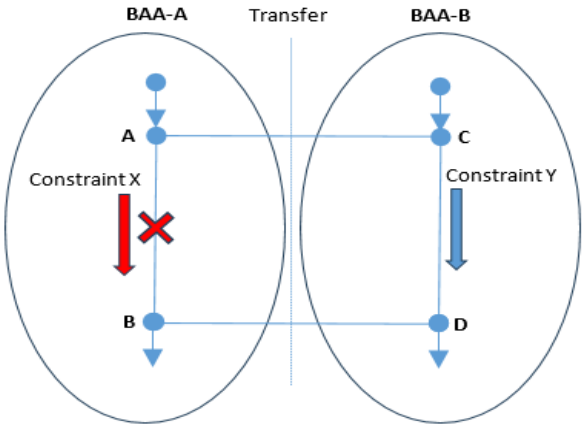


Figure 2: Parallel flow effects illustration between neighboring balancing areas.

In the context of the current EDAM congestion revenue allocation design, congestion revenues that may materialize associated with pricing locations C and D within BAA-B as a result of parallel flows in relation to constraint X would be allocated to BAA-A since constraint X is located in that area.

V. Issue Statement & Objectives – Congestion Revenue Allocation & Parallel Flow

The EDAM design allocates congestion revenues associated with an internal transmission constraint to the balancing area where the constraint is located, including congestion revenues associated with parallel flows that may have accrued in an adjacent EDAM to the extent that the transmission constraint has a flow impact on schedules in the adjacent area. Thus, the balancing area in which the congestion price effects of parallel flows may have materialized because of a binding internal transmission constraint in an adjacent EDAM balancing area is not allocated the parallel flow congestion revenues under the current EDAM design. Instead, this congestion revenue is allocated to the balancing area where the constraint is located. This allocation method of congestion revenues associated with parallel flows may not provide sufficient revenues for the EDAM entity to sub-allocate under the terms of their OATT and provide congestion cost protection for transmission customers exercising their transmission rights.

It is also important to recognize the intent of the EDAM entities that will be joining the market in 2026, particularly as demonstrated through the PacifiCorp OATT revisions, is to sub-allocate received congestion revenues first to transmission customers exercising their eligible firm PTP and NITS OATT transmission rights through the submission of a balanced self-schedule in the market associated with

those transmission rights to support a level of congestion hedge. PacifiCorp is proposing to allocate any remaining congestion revenues to their measured demand (load + exports).

Issue Statement: The current EDAM design allocates congestion revenues to the balancing area in which the internal transmission constraint materialized, including congestion revenues resulting from parallel flow effects collected from an adjacent EDAM balancing area to the extent the use of its transmission system impacts congestion prices at locations in the neighboring area. The consideration under this initiative is whether and how the EDAM design should be modified regarding allocation of congestion revenue associated with parallel flows.

The initiative focuses narrowly on the allocation of parallel flow congestion revenues arising as a result of internal transmission constraints within an EDAM balancing area and does not seek to address allocation of transfer revenues that may result from scheduling limit constraints at interties or transfer points between EDAM balancing areas.

In comments to the issue paper, some stakeholders indicated a desire to identify guiding objectives associated with this narrow initiative to help evaluate the effectiveness of any alternative designs in meeting those objectives. Recognizing the narrower scope of the expedited initiative, the objectives are described as follows:

- Establish a mechanism that will enable the market operator to distribute parallel flow congestion revenues to EDAM entities to support management of congestion cost exposure associated with exercise of firm PTP and NITS OATT transmission rights.
- Support market efficiency incentives.
- Minimize congestion cost shifts between EDAM balancing areas.
- Support mechanisms identified or established by prospective entities for allocation of congestion revenues received from the market operator under the terms of their OATT.
- Support timely implementation of EDAM in May 2026.

Some commenters also requested consideration of principles to support not only the later long-term design, but this expedited stakeholder initiative considering parallel flow congestion revenue allocation. To that end, some commenters pointed to the design principles developed to help guide EDAM policy design, particularly associated with congestion rent allocation.[2] The principle or objective identified as part of the *EDAM Common Design Principles & Concepts* document was "[t]o hold transmission customers harmless without creating new uplifts." In the document, this principle was primarily contextualized recognizing the need for the EDAM design to support fair and equitable congestion rent allocation between participating balancing areas which bring transmission capability to the market to support equitable energy transfers that benefit all participants. Further, the principle is contextualized as also supporting intra-day exercise of OATT transmission rights without creating new uplifts on OATT transmission customers while retaining current congestion allocation processes, namely those processes relying on the allocation of congestion rents to the EDAM entity who further then allocates these among their transmission customers under the terms of their OATTs. These entities have already had to establish sub-allocation mechanisms for distribution of congestion rents among their transmission customers as part of their participation in the WEIM.

[2] EDAM Common Design Principles & Concepts (2021).

These objectives, along with the congestion rent allocation principle noted above, will help evaluate the effectiveness of an identified proposal. Regarding principles for longer-term solutions, we will revisit these principles with stakeholders and consider what changes should be made as part of the forthcoming stakeholder processes evaluating near-term and long-term enhancements as described section VIII.C.

VI. Summary of Stakeholder Comments on the Revised Draft Final Proposal

Stakeholders submitted comments on the Revised Draft Final Proposal on June 2nd providing further input and perspectives on the proposed allocation of congestion revenues associated with parallel flows. Stakeholders submitted nineteen sets of comments on the Revised Draft Final Proposal. Across the initiative and iterations of proposals, stakeholders have submitted sixty-nine sets of stakeholder comments that have informed the proposal.

In comments to the Revised Draft Final Proposal, stakeholders broadly supported the proposed design for congestion revenue allocation associated with parallel flows. Stakeholders recognized the design as an acceptable or reasonable compromise to support EDAM launch, acknowledging that the ISO and stakeholders will re-engage prior to EDAM launch (Spring 2026) to evaluate near-term enhancements and a long-term durable design for congestion revenue allocation.

Stakeholders supported further consideration of the identified near-term enhancements. These would enable congestion revenue allocation associated with parallel flows based on cleared market schedules associated with eligible firm OATT transmission rights, whether economically bid or self-scheduled, and would further support parity in allocation to the CAISO balancing area which offers CRRs rather than OATT transmission rights. Stakeholders saw benefit in further defining this design, others suggested areas of caution associated with this approach that will need to be evaluated. This design, once vetted through the stakeholder process, would be slated for implementation within the first year of EDAM operations or soon thereafter (in 2027).

Stakeholders also supported the described roadmap for continued stakeholder engagement. Namely, the intent to engage prior to EDAM go-live in Spring 2026 to re-initiate working group discussions on the near-term enhancements and more pointedly on a long-term durable design across a 12 to 24 month period by the end of which the ISO would present a proposal to the governing entity and the design would be implemented within the third year of EDAM operations. Stakeholders appreciated the more detailed plan and expressed the need to execute according to those expectations.

A few stakeholders opposed the design, with one noting the need for the ISO to take the necessary time to establish a holistic long-term design rather than an interim framework. Another stakeholder noted the basis for its opposition that the design allocates parallel flow congestion revenue associated with the exercise of eligible firm OATT rights that may have been arranged after EDAM launch, suggesting a differentiation in treatment of OATT right pre and post EDAM launch. The ISO appreciates these perspectives and recognizes that the design will evolve as the proposed design is intended to support EDAM go-live. With market operational experience and through further stakeholder discussions, the design will evolve within the first year of EDAM operations and will further evolve through consideration of a spectrum of long-term designs which will be considered collaboratively with stakeholders. As

described in the prior version of the proposal, creating a distinction in treatment of OATT rights for purposes of congestion revenue allocation impacts the terms and conditions of transmission service that requires changes to tariffs, can inadvertently affect other aspects of EDAM design such as the EDAM access charge, and may require similar consideration related to CAISO transmission uses as load across the West continues to grow. Moreover, the realities in the West are that the ability to acquire new long-term firm transmission is severely limited. Future evolution discussions will consider whether to consider fundamentally different approaches to parallel flow congestion revenue allocation, such as flow entitlements between balancing areas based on a more pragmatic historical physical flow evaluation rather than specific schedules tied to the exercise transmission rights. Stakeholders can provide further input during those discussions.

A few stakeholders continued to suggest the ISO consider enabling direct settlement of congestion revenues between the market operator and the scheduling coordinator. Under the current EDAM design, this direct settlement from market operator to Scheduling Coordinator occurs in the case of legacy transmission contracts (pre-OATT) or transmission ownership rights, but otherwise all other congestion revenues are allocated to the EDAM entity with deference for sub-allocation under the terms of their OATT, consistent with the current structure in the WEIM. The ISO is open to consideration of more direct settlement as a future design enhancement, which will have sizable implementation impacts, and suggests the market participants consider this topic through the annual policy catalog process for prioritization.

A stakeholder requested clarification that the full congestion hedge will continue to be provided to parties exercising TORs/ETC/legacy transmission contracts (pre-OATT). The ISO confirms that this element of the EDAM design is not affected by this proposal and the ISO will continue, as under the approved EDAM design, to directly settle congestion rents with parties exercising these legacy or transmission ownership contracts which will continue to receive their full congestion hedge allocation.

A stakeholder suggested that the proposal consider reasonable guardrails to limit or avoid windfalls of congestion revenues associated with parallel flows and mitigate any such cost shifts. The ISO does not believe it is prudent at this late stage to consider arbitrary limits to congestion revenue allocation, nor are there limits imposed under the current congestion revenue allocation design, particularly absent market operational experience. Nevertheless, it is important to note that the monitoring described in this proposal includes monitoring of price impacts of constraints and associated allocation of congestion revenues among EDAM balancing areas. To the extent that operational experience reveals significant discrepancies or unintended consequences in allocation of congestion revenues that impact EDAM balancing areas, the ISO will undertake a prompt review and consider mitigating actions if necessary. By that time, the ISO and stakeholders will be in working group discussions considering near-term enhancements and a long-term design, thus providing a forum to discuss any unintended consequences and action to remedy these.

Some stakeholders further emphasized the need to continue to discuss CRRs in EDAM and potential CRR modeling enhancements as part of the ongoing *CRR Enhancements* initiatives. These stakeholders also expressed an impetus for moving forward with the near-term enhancements proposed in this paper to create further symmetry to parallel flow congestion revenue allocation for the CAISO balancing area and CRR processes. The ISO will host a stakeholder workshop to discuss any adjustments necessary to the CRR modeling to support EDAM go-live. The workshop discussions will further support and help inform

stakeholder participation in the *CRR Enhancements* initiative, as it considers longer-term CRR considerations in the context of EDAM.

Finally, a stakeholder raised concerns that under the proposed design, a market participant could self-schedule a transaction using a CRN and submit an offsetting self-schedule without a CRN. This could result in the market participant receiving congestion revenue allocations without incurring congestion costs related to parallel flow. The ISO acknowledges this theoretical concern. Such behavior, however, may violate FERC's rules and the ISO tariff depending on the circumstances. Submitting off-setting schedules to drive higher congestion revenue allocations potentially violates FERC's rules prohibiting electric energy market manipulation (18 CFR § 1c.2). Additionally, ISO tariff section 37.3.1.1 requires that market participant bids must be "from resources that are reasonably expected to be available and capable of performing at the levels specified in the Bid." If a market participant were to bid in this way, then there may be questions about whether the off-setting bids violated the tariff's prohibition against submitting infeasible bids. Such bids also may be seen as violating FERC's rule against submitting false or misleading information to an independent system operator or regional transmission organization (18 CFR § 35.41(b)). Based on these considerations, the ISO at this time does not see a need to consider additional or new tariff provisions to address this potential use of off-setting self-schedules. The ISO will monitor for such behavior and the ISO and/or the ISO Department of Market Monitoring (DMM) will refer the conduct to FERC's Office of Enforcement as warranted. As with all market rules, the ISO will consider further tariff-based rules to address adverse market outcomes based on experience.

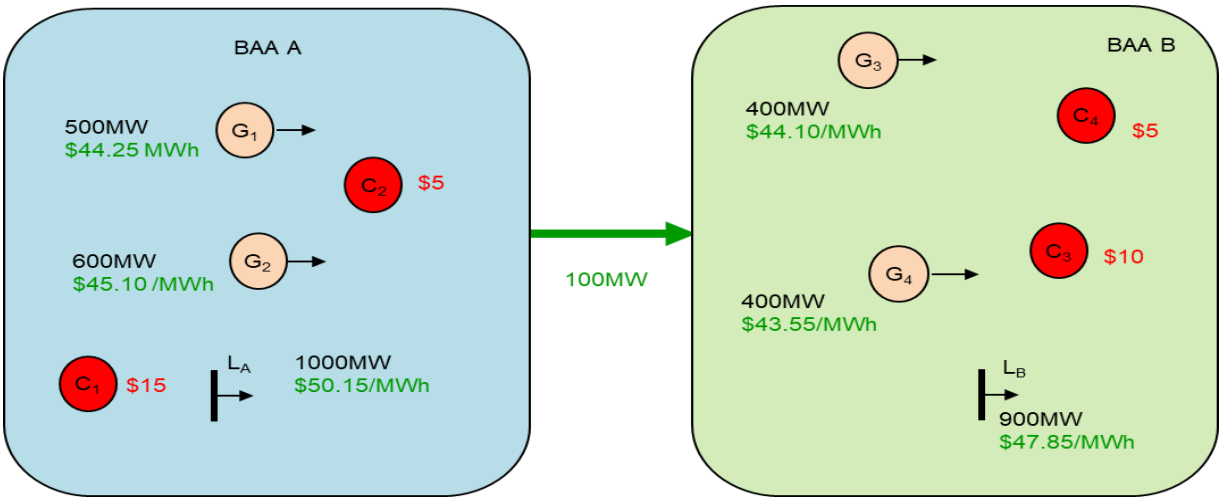
VII. Current EDAM Design for Congestion Revenue Allocation

The current EDAM design allocates congestion revenues to the EDAM balancing authority area in which the internal transmission constraint materialized. This design follows cost-causation principles under which congestion revenues flow to the area where the constraint is binding since the balancing area bears the costs and actions to manage the effects of that transmission constraint. Under this design, congestion revenues arising from parallel flows on an adjacent system – to the extent there is a congestion price impact associated with the constraint at a pricing location in that adjacent EDAM area – are allocated to the balancing area where the transmission constraint is located. This design is consistent with how WEIM congestion revenues are allocated today, and over the last decade, across WEIM balancing authority areas.

The market operator real-time and day-ahead markets, and by extension EDAM and WEIM, utilize the FNM to model and enforce all appropriate transmission system and resource constraints to optimally commit and dispatch resources to meet demand across the market footprint. The FNM provides the necessary information to determine and mitigate transmission congestion as well as calculate the relevant LMP at each pricing node location or aggregated pricing node location within the FNM. The LMP is calculated at each pricing node or aggregated pricing node location across the market footprint.

The MCC of the LMP at each pricing location is calculated based on a linear combination of the shadow prices of all binding constraints in the network, each multiplied by the corresponding power transfer distribution factor (PTDF) as determined by sensitivity analysis of the power flow solution within the minimum effectiveness threshold. This methodology is common to all LMP markets.

The example below illustrates the methodology described above as applied in a multi-balancing area optimization under the approved EDAM design and currently in effect in the WEIM.[3]



In this example, the market optimizes generation bid in Balancing Authority Area A (BAA A) and Balancing Authority Area B (BAA B) to meet demand in BAA A and BAA B. During the market optimization, the market identified four transmission constraint that are binding at various levels. The generation and load have various power transfer distribution factors which indicate their effectiveness in mitigating congestion at these constraint locations. The optimization determines the least cost solution given the transmission constraints in that generation in BAA A serves 1,000 MW of load within BAA A as well as 100 MWs of load in BAA B. The balance of BAA B demand is being served by internal generation within BAA B. Specifically, the market dispatches Generator 1 to 500 MW at $44.25/MWh, Generator 2 to 600 MW at $45.10/MWh, Generator 3 to 400 MW at $44.10/MWh and Generator 4 to 400 MW at $43.55/MWh to serve 1,000 MWs of BAA A Demand priced at $50.15/MWh and 900 MW of BAA B Demand priced at $47.85/MWh. This solution results in the collection of $8,970 of congestion revenue across the market area (*i.e.*, the total congestion revenue = sum of (500MW X $44.25/MWh, 600 MW X $45.10, 400 MW X $44.10, 400MW X $43.55) – sum (1000 X $50.15, 900 X $47.85).

This example demonstrates the calculation of congestion revenue that will be applied in EDAM to generate congestion revenue across the market area, except for the power balance constraint that will separately account for EDAM transfer revenue when binding. EDAM transfer revenue is generated by differences in the MEC between balancing areas when the power balance constraint binds and not the MCC as described in this example. Each are separately calculated and distributed according to distinct ISO tariff settlement rules,[4] and because in this case we are focused on congestion internal to each

[3] *See* CAISO Tariff, Appendix C as accepted by the DAME-EDAM Order (establishing the LMP as the total of the Marginal Energy Cost (MEC), plus Marginal Cost of Congestion (MCC), plus Marginal Cost of Losses (MCL) and, if applicable, the Marginal Greenhouse Gas (MCG) effective upon implementation of EDAM); *see also* Section 33.11.1.2 (day-ahead congestion revenue calculation effective upon implementation of EDAM), Section 33.11.3.9.3 (day-ahead congestion offset settlement effective upon implementation of EDAM); *compare* CAISO Tariff, Section 11.5.4.1.1 (currently effective real-time congestion offset in WEIM) and Section 11.5.4.1.2 (real-time congestion offset in WEIM effective upon implementation of EDAM).

[4] *See* CAISO Tariff, Section 11.5.4.1.5 (real-time transfer revenue settlement in WEIM effective upon implementation of EDAM), Section 33.11.1.1.1 (day-ahead transfer revenue calculation effective upon

balancing area, for simplicity, this example does not account for the power balance constraint binding so there is no MEC difference or corresponding EDAM transfer revenue settlement to be considered.

Tables 1 through 3 below provide details concerning the inputs to this congestion revenue calculation, specifically the power transfer distribution factors applied in the state estimator solution based upon a power flow analysis, LMP formulation and the congestion revenue calculation and settlement.

Table 1: Congestion Effectiveness

		BAA A			BAA B		
	Power Transfer Distribution Factor						
	Price	G1	G2	L1	G3	G4	L2
MEC	$ 40.00	100%	100%	100%	100%	100%	100%
C1	$ 15.00	15%	25%	50%	3%	2%	5%
C2	$ 5.00	30%	19%	40%	4%	4%	3%
C3	$ 10.00	2%	3%	4%	21%	25%	45%
C4	$ 5.00	6%	2%	5%	27%	11%	49%

Table 2: Locational Marginal Price and Marginal Cost of Congestion

		BAA A			BAA B		
	LMP Formulation						
	Price	G1	G2	L1	G3	G4	L2
MEC	$ 40.00	$ 40.00	$ 40.00	$ 40.00	$ 40.00	$ 40.00	$ 40.00
C1	$ 15.00	$ 2.25	$ 3.75	$ 7.50	$ 0.45	$ 0.30	$ 0.75
C2	$ 5.00	$ 1.50	$ 0.95	$ 2.00	$ 0.20	$ 0.20	$ 0.15
C3	$ 10.00	$ 0.20	$ 0.30	$ 0.40	$ 2.10	$ 2.50	$ 4.50
C4	$ 5.00	$ 0.30	$ 0.10	$ 0.25	$ 1.35	$ 0.55	$ 2.45
LMP		$ 44.25	$ 45.10	$ 50.15	$ 44.10	$ 43.55	$ 47.85

Table 3: Congestion Revenue Calculation and Settlement

BAA A	Schedule	LMP	MEC	MCC	STLMT Amount	MEC	MCC Collection
G1	500	$ 44.25	$ 40	$ 4.25	$ 22,125	$ 20,000	$ 2,125
G2	600	$ 45.10	$ 40	$ 5.10	$ 27,060	$ 24,000	$ 3,060
L1	-1000	$ 50.15	$ 40	$ 10.15	$(50,150)	$(40,000)	$(10,150)
TSR A-B	-100	$ 40.00	$ 40	$ -	$ (4,000)	$ (4,000)	$ -
BAA Neutrality					$ (4,965)	$ -	$ (4,965)
BAA B	Schedule	LMP	MEC	MCC	STLMT Amount	MEC	MCC Collection
G3	400	$ 44.10	$ 40	$ 4.10	$ 17,640	$ 16,000	$ 1,640

implementation of EDAM), and Section 33.11.3.9.4 (day-ahead marginal energy offset settlement effective upon implementation of EDAM).

G4	400	$ 43.55	$ 40	$ 3.55	$ 17,420	$ 16,000	$ 1,420
L2	-900	$ 47.85	$ 40	$ 7.85	$(43,065.)	$(36,000)	$ (7,065)
TSR A-B	100	$ 40.00	$ 40	$ -	$ 4,000	$ 4,000	$ -
BAA B Neutrality					$ (4,005)	$ -	$ (4,005)

The next step in the market operator settlement process is to distribute the total calculated congestion revenue ($8,970) among the balancing areas that constitute the market area. The FERC-approved ISO tariff requires congestion revenue collected across the market area will be distributed to the balancing area in which the constraints materialize in proportion to the net schedule effectiveness to that constraint. For each settlement period, the market operator will calculate the contribution of each balancing area to the MCC at each resource location and intertie based on the location of the constraints in each balancing area, at each intertie.[5]

Table 4 completes this example and reflects the contribution of the constraints (using the PTSD factors) to the congestion revenue collected between BAA A and BAA B, which determines the congestion revenue distribution between BAA A and BAA B.

Table 4: Contribution to Marginal Cost of Congestion

MCC Contribution	G1	G2	L1	G3	G4	L2	Congestion Revenue BAA A	Congestion Revenue BAA B
Constraint 1	$1,125	$2,250	$(7,500)	$180	$ 120	$ (675)	$(4,500)	
Constraint 2	$ 750	$ 570	$(2,000)	$ 80	$ 80	$(135)	$ (655)	
Constraint 3	$ 100	$ 180	$ (400)	$840	$1,000	$(4,050)		$(2,330)
Constraint 4	$ 150	$ 60	$ (250)	$540	$ 220	$(2,205)		$(1,485)
						BAA Neutrality	$ (5,155)	$(3,815)
						BAA Offset	$ 5,155	$3,815

In the example above, the energy settlement generates $8,970 of congestion revenue across the market area, of which $4,965 is attributed to BAA A and $4,005 is attributed to BAA B. The final step is to distribute the congestion revenue collected across the market area to the balancing area in which the constraint materializes in proportion to the net schedule effectiveness to that constraint.[6] This step increases the congestion revenue distributed to BAA A by $190 to $5,155 because that is the balancing area responsible for managing the constraint and represents the congestion revenue associated with parallel flow effects and, at the same time, reduces the congestion revenue distributed to BAA B by $190 to $3,815 because that is the balancing area that contributed to the congestion in BAA A. This

[5] *See* CAISO Tariff Section 33.11.3.9.3 (day-ahead congestion offset settlement effective upon implementation of EDAM); and *compare* CAISO Tariff, Section 11.5.4.1.1 (currently effective real-time congestion offset in WEIM) and Section 11.5.4.1.2 (real-time congestion offset in WEIM effective upon implementation of EDAM)
[6] *Id*.

$190 congestion revenue adjustment, representative of parallel flow congestion revenue, from BAA B to BAA A represents about two percent of the total congestion revenue collected across the market area.

VIII. Final Proposal for Parallel Flow Congestion Revenue Allocation

This Final Proposal retains the substantive description on the parallel flow congestion revenue allocation design as in the prior iteration of the Revised Draft Final Proposal.

A. Proposal Description

This proposal describes the design for allocation of congestion revenues associated with parallel flows supporting EDAM go-live in Sprin 2026. This substantive design is unchanged from the Revised Draft Final Proposal and allocates additional congestion revenues to the EDAM entity associated with an external transmission constraint (in neighboring EDAM area) which it does not receive under the current design. These additional congestion revenues are sub-allocated under the terms of the EDAM entity OATT and, if so provided, can support a greater congestion hedge for transmission customers exercising their eligible firm PTP and NITS transmission rights.

The proposal, supporting EDAM go-live in Spring 2026, can be summarized as follows:

- The EDAM balancing area will continue to be allocated internal congestion revenues collected from binding transmission constraints internal to its balancing area. This aspect remains consistent with the FERC-approved design and is not modified by this expedited initiative.
- Congestion revenues associated with parallel flows accruing within an EDAM balancing area due to a binding transmission constraint within another EDAM balancing area will be allocated by the market operator to the EDAM balancing area where the congestion revenues are collected (not where the transmission constraint is located) as result of the exercise of eligible firm PTP and NITS transmission rights through a balanced self-schedule that refers to use of such rights. The eligible firm PTP and NITS transmission rights are established under the EDAM entity OATT and consist of long-term firm and monthly firm PTP and NITS OATT transmission rights, including conditional firm transmission. These revenues will be further sub-allocated by the EDAM entity under the terms of its OATT.
- Remaining parallel flow congestion revenues, beyond those allocated as noted above based on the exercise of eligible firm PTP and NITS OATT transmission rights through a balanced source/sink self-schedule, which are collected in an EDAM balancing area as a result of a binding transmission constraint located in another EDAM balancing area, will be allocated by the market operator to that other EDAM balancing area where the transmission constraint is located.
- The CAISO balancing area does not offer firm PTP and NITS transmission service. Rather it offers a single type of transmission service (new firm use) and administers congestion revenue rights (CRR) – financial rights – to hedge congestion in the day-ahead market. Thus, under this proposal the CAISO balancing area may not be allocated congestion revenues associated with parallel flows at the onset of EDAM for constraints in a neighboring EDAM balancing area. However, the CAISO balancing area will collect congestion revenues associated with parallel flows materializing in a neighboring EDAM balancing areas as a result of a binding transmission constraint internal to the CAISO balancing area under this proposal since, after allocation based

on self-scheduled exercise of eligible firm PTP and NITS transmission rights, remaining parallel flow congestion revenues are allocated to the EDAM balancing area where the constraint is located. These are incremental congestion revenues to what the CAISO receives today and will support funding of CRRs in the CAISO balancing area. Moreover, to further mitigate associated CRR funding risks, the CAISO will consider CRR modeling enhancement that consider transmission uses in neighboring EDAM areas, which can further improve the accuracy of CRR awards and reduce the risk of allocating CRRs that are predominantly impacted by parallel flow effects, thus reducing CRR under-funding risks.

The Final Proposal is responsive to stakeholder comments tailoring the allocation of parallel flow congestion revenues based on the exercise of eligible firm PTP and NITS OATT transmission rights (through a balanced self-schedule), which would provide additional congestion revenues not received under the current (status quo) design for the EDAM entity to sub-allocate under their OATT. Any remaining parallel flow congestion revenue, accruing because of a transmission constraint in a neighboring EDAM balancing area, would be allocated to the area where the binding transmission constraint is located.

Transmission customers will register their firm PTP and NITS OATT transmission rights with the market operator identifying the characteristics of the rights from source to sink. These registered transmission rights will be associated with a Contract Reference Number (CRN) which, when included in the bid submission, associates that bid with existing OATT transmission rights. When the scheduling coordinator representing the transmission customer submits a self-schedule with a CRN at the source location – whether a physical generator in an EDAM balancing area or an import location – the market will recognize that this source location is associated with registered transmission rights. Similarly, when a self-schedule is submitted at the sink location – whether this is scheduling of the load within an EDAM balancing area or scheduling an export at a location – the market will recognize that the sink location is associated with a CRN representing those registered firm transmission rights.

The market operator will collect resulting congestion revenues associated with parallel flows for the balanced source/sink self-schedules associated with CRNs representing the exercise of eligible firm PTP and NITS transmission rights consistent with the EDAM entity OATT and will allocate those parallel flow congestion revenues to the EDAM entity where the congestion revenues materialized. In turn, the EDAM entity will sub-allocate these congestion revenues under the terms of their OATT.

After congestion revenues associated with parallel flows have been allocated as described above to the balancing area where the congestion revenues are collected, any remaining parallel flow congestion revenues (whether positive or negative) will be allocated to the EDAM balancing area where that transmission constraint is located. The ISO expects there to be a sizable amount of remaining parallel flow congestion revenue to be allocated to the EDAM balancing area where the binding transmission constraint is located since this parallel flow congestion revenue can accrue as a result of other economically bid load and supply, exercise of short-term transmission rights (not within the definition of eligible rights) and day to day, hour to hour transactions otherwise not associated with self-schedules exercising eligible firm PTP and NITS transmission rights through a CRN.

Finally, it is important to note that congestion revenues accruing internal to an EDAM balancing area because of an internal transmission constraint are allocated fully to that balancing area, which is where

the transmission constraint is located. This allocation remains unaffected by this proposal and is consistent with current FERC-approved design.

Turning to the objectives and EDAM design principles, the proposal aligns with the identified objectives and the associated principle described in section V of this Final Proposal. The proposal allocates congestion revenues associated with parallel flows for the exercise of eligible firm PTP and NITS transmission rights based on balanced source/sink self-schedules to the EDAM balancing area where these congestion revenues accrued. Additionally, the EDAM entity is allocated internal congestion revenues materializing within its balancing area because of an internal transmission constraint. These congestion revenues can then be further sub-allocated by the EDAM entity to provide a greater, more complete, congestion hedge under the terms of their OATT to transmission customers exercising their eligible firm PTP and NITS transmission rights for congestion price effects of internal or external transmission constraints. This aligns with the first objective of managing the congestion cost exposure for transmission customers exercising their firm OATT transmission rights.

The second objective, which evaluates whether the design supports market efficiency incentives, may not fully align with the proposal as there may still be an incentive to self-schedule firm OATT transmission rights to hedge congestion cost exposure. However, as explained earlier, the level of incremental incentive to self-schedule is unclear as is the impact on market efficiency and this will be one of the elements monitored as the EDAM launches. Nevertheless, introduction of the future near-term enhancement design described later in this document seeks to mitigate any incentive to self-schedule to obtain a congestion hedge through enabling allocation of parallel flow congestion revenues based on economically bid cleared market schedules associated with eligible firm PTP and NITS transmission rights.

The third objective seeks to minimize congestion cost shifts between EDAM balancing areas. The proposal aligns with this objective by allocating only the parallel flow congestion revenues for day-ahead exercise of eligible firm PTP and NITS transmission rights based on balanced source/sink self-schedules, but the remaining parallel flow congestion revenues are allocated to the balancing area where the transmission constraint is located. This avoids a balancing area facing unintended costs associated with counter flow scenarios as described above and allocates these remaining revenues consistent with EDAM FERC-approved design (which is in effect in WEIM today).

The fourth objective is testing whether the design supports, and does not undermine, EDAM entity established allocation mechanisms. The proposal supports the EDAM entity OATT allocation mechanisms as it provides additional revenues – the parallel flow congestion revenue as described – which can then be sub-allocated under the EDAM entity OATT. The proposal does not dictate a different OATT sub-allocation mechanism. Finally, the proposed design is implementable by the ISO in time for EDAM launch in 2026 which is consistent with the objective of supporting timely EDAM implementation.

The proposed design to allocation of congestion revenue associated with parallel flows is also consistent with the congestion rent allocation principle as part of the *EDAM Common Design Principles & Concepts* document further described in section V of this Final Proposal. Under the proposal, the EDAM entity will be allocated parallel flow congestion revenues associated with the exercise of firm PTP and NITS OATT transmission rights based on balanced source/sink self-schedules. Moreover, the EDAM entity is still allocated internal congestion revenues resulting from an internal transmission constraint. This will

provide the EDAM entity with congestion revenues to be able to sub-allocate under the terms of their OATT to mitigate congestion cost exposure to its transmission customers.

a. Addressing incentives to self-schedule under the proposed design

A number of stakeholders commented and expressed concern that the proposed design may incent self-scheduling associated with eligible firm PTP and NITS OATT transmission rights (through the use of a CRN) to obtain a congestion hedge more readily through the EDAM entity OATT based on their sub-allocation mechanisms. The Market Surveillance Committee (MSC) also expressed the same concern and framing it as a "use it or lose" action, incenting transmission customers to use their transmission rights through self-schedules to obtain a congestion cost hedge rather than economically bid and derive the benefits of optimized dispatch.

It is important to contextualize self-scheduling activities within the EDAM design. Under the current design, certain transactions inherently are required to be self-scheduled:

- Self-schedule of wheel-through transactions. Due to limited economic bidding at the interties of EDAM balancing areas, transmission customers seeking to wheel through an EDAM balancing area must self-schedule the import transaction and self-schedule the export transaction. The congestion revenue allocation methodology does not affect this activity.
- Self-schedule of exports. Similarly, exports from an EDAM area to a non-EDAM area must be self-scheduled. While the internal generator supporting an export could be self-scheduled or economically bid in the market, the transaction at the export location must be self-scheduled.

The self-schedule incentive concerns are more narrowly focused on designated network resources, under NITS service, serving load within the EDAM balancing area or relatedly potentially aspects of PTP service to the extent there are internal transactions or potentially associated with the internal generator with transmission service supporting an export. Any incentive to self-schedule must be balanced against the ability to economically bid and the benefits of optimized dispatch foregone through self scheduling. A NITS transmission customer (load serving entity) with a portfolio of designated network resources can derive significant benefit through economic bidding of their resource portfolio settled at the LMP, paid the congestion component, and on the load side could be allocated a share of congestion revenues under EDAM entity OATTs[7] to offset the congestion cost exposure load pays. Self-scheduling of the generation portfolio solely with the aim to limit its congestion cost exposure may undermine its ability to efficiently and cost effectively serve its load but also overlooks inherently congestion revenues allocated by the EDAM entity under its OATT to load serving entities, including potentially transfer revenues, which offset the congestion cost exposure for a NITS customer (load serving entity). Similarly, for PTP transmission service, resources supporting exports could economically bid its output and self-schedule the export depending on the conditions on the grid. Self-scheduling the generator would limit the ability to be economically dispatched potentially foregoing a more cost-effective way of meeting the contractual obligations supporting the export to another balancing area.

As a way to contextualize further the potential incentive to self-schedule to derive a congestion hedge, it may be helpful to look at the scope and magnitude of transmission rights within the PacifiCorp balancing areas that may potentially be exercised through balanced self-schedules considering the existing long-

[7] Under PacifiCorp's filed OATT revisions, Tier 2 allocation of congestion revenues is to measured demand.

term firm PTP transmission reservations and the NITS long-term designated network resources dedicated to serving load within the balancing area. PacifiCorp, as the first WEIM entity which has maximized its participation of resources in the real-time market, will also be the first EDAM entity. PacifiCorp has explicitly stated that the economic dispatch and commitment of resources that result from economic bidding in the market will create significant customer benefits. Additionally, PacifiCorp has stated that it believes the risk of congestion costs does not outweigh the benefits of economic bidding. With this context, it is assumed that PacifiCorp's market participation will not be driven solely by the ability to self-schedule the exercise of transmission rights to derive a congestion hedge. Thus, it is important to look with this context to what extent can the incentive to self-schedule to derive a congestion hedge drive other transmission customers, whether PTP or NITS, within the PacifiCorp balancing areas.

Focusing first on NITS transmission on the PacifiCorp system and the incentive for long-term designated network resources to self-schedule which are designated to serve load serving entities within the PacifiCorp balancing areas. The following data is based on the list of long-term designated network resources (with NITS service) in the PacifiCorp balancing areas publicly located on PacifiCorp's OASIS[8]:

	PacifiCorp Merchant (NITS)	**Other Load Serving Entities (NITS)**
Designated Network Resources	17,939 MW	867 MW – 1000 MW[9]
Percentage of total designations	95%	5%

PacifiCorp merchant, which serves its native load within the balancing areas, holds 95% of the total long-term designated network resources (17,939 MW) on PacifiCorp's system whose bidding and market participation practices would not be driven by an incentive to self-schedule to derive a congestion hedge. Some portion of the remaining 867-1000 MW may potentially consider self-scheduling driven by the desire to hedge congestion costs by the load serving entity, but this is speculative absent actual market conditions and experience, particularly recognizing that an allocation of congestion revenues inherently will be sub-allocated by PacifiCorp to load serving entities under its OATT terms.

On the PTP transmission side, based on public data posted on PacifiCorp's OASIS, in 2024 there were a total of 3609 MW of long-term PTP transmission reservations held among a number of transmission customers representing wheels through or exports from the PacifiCorp transmission system.[10] The extent of the aggregate reservations, based on 2024 data, can be summarized as follows:

	PacifiCorp Merchant	**Other Transmission Customers**
Long Term PTP reservations	1955 MW	1654 MW

[8] List of Designated Network Resources, PacifiCorp OASIS, April 2025.
[9] There are 867 MW of remaining designated resources with specific designated amounts, and a number of BPA designated resources with "varies" amounts indicating obligations under a load-following contract to public utilities, preference customers, located in PacifiCorp's balancing area. For purposes of the calculation the "varies" portion was estimated to bring the total amount to 1000 MW, and this portion could be somewhat smaller or somewhat larger but nevertheless comparatively within the identified range.
[10] 2024 Transmission Formula Annual Update (2024 Projection), Attachment 9a, PacifiCorp OASIS.

Percentage of total	54%	46%

PacifiCorp merchant holds 1955 MW, which is safe to assume do not consist of wheel through rights. Though the nature of why and where (source/sink) PacifiCorp merchant holds these PTP rights is not publicly available, it is assumed that some of these transmission rights may be self-scheduled, but some may also be made available to the market. For example, if PacifiCorp merchant uses certain PTP rights for exports of internal generation, it could consider economically bidding the generation supporting the export and self-scheduling the export at the appropriate location. There is no evidence or reason to assume its activity may be driven solely by the need to obtain a congestion hedge.

The remaining 1654 MW is a combination of wheels through and exports. The exercise of these rights is unaffected by this current initiative as wheels-through must be self-scheduled. There likely are some portions of these long-term firm PTP transmission rights associated with exports and holders may be driven by the incentive to self-schedule to fulfill contractual obligations and obtain a congestion hedge.

This review indicates, at least in the context of PacifiCorp participation in the EDAM, even if the congestion revenue allocation design created an incentive to self-schedule, the magnitude of self-scheduled firm PTP and NITS transmission rights would be comparatively small in the broader context of all the NITS transmission rights and the sizable magnitude of designated network resources. Similarly with regards to long-term firm PTP transmission rights, considering that wheels through must be self-scheduled, the incremental incentive to self-schedule the internal resource supporting an export is relatively small.

b. Allocation for TORs/ETCs/legacy transmission contracts

Transmission ownership rights and legacy transmission contracts (pre-OATT contracts), and other legacy existing transmission contracts in the CAISO balancing area, will continue to receive a congestion hedge as these do today and extended to EDAM balancing areas as provided for under the existing EDAM tariff.[11] Transmission customers can exercise these transmission rights in the same manner as described for OATT transmission rights. The transmission rights are registered with the market operator and can be exercised through a self-schedule associated with a CRN. The market operator will directly settle the congestion costs with the transmission customer (through the scheduling coordinator) to provide a congestion hedge as provided for under the EDAM tariff. The market operator will calculate the congestion difference between the defined contract source(s) and contract sink(s) of the contract path of the CRN within their transmission rights. The congestion difference, whether congestion revenue or congestion rent, will be settled with the financial scheduling coordinator designated by the contract much as is done today associated with these transmission rights in the market today.

c. Examples illustrating the Phase 1 proposal

Recognizing the complexity of the overall topic of congestion revenue accrual and allocation, the following illustrations are intended to help stakeholders visualize the concepts behind the proposal and understand the practical effects of the proposal under various scenarios for transmission customers exercising their eligible firm PTP and NITS transmission rights. The received parallel flow congestion revenues allocated to the EDAM entity would be sub-allocated by the EDAM entity under the terms of

[11] CAISO Tariff Section 33.11.3.8 (approved EDAM tariff).

their OATT to support a greater, more complete, congestion hedge for transmission customers exercising these eligible transmission rights.

Figure 1 illustrates the conceptual application of the proposal when a transmission customer exercises firm OATT transmission rights from an import location to deliver supply to load within the EDAM balancing area. This example is generally representative of a load serving entity within an EDAM balancing area with eligible designated network resources, holding NITS transmission service rights registered with the market operator, and with an associated CRN representing the source and sink of transmission rights, namely from the import location to the internal load.

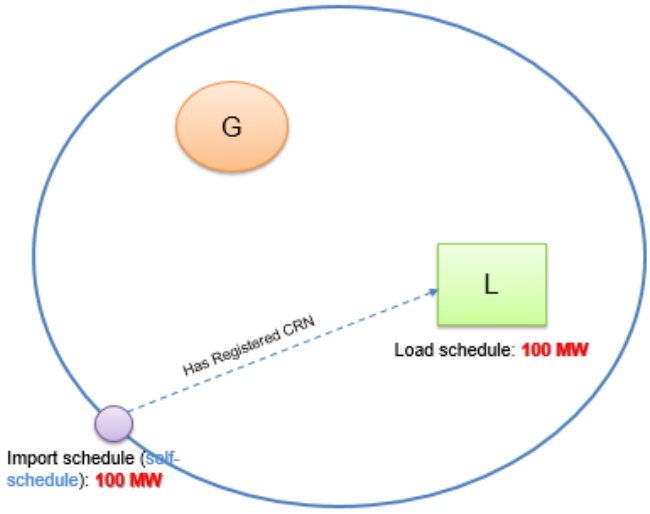


Figure 1: Illustrative example of balanced source and sink self-schedule exercise of transmission rights.

The scheduling coordinator representing the import supply submits a balanced self-schedule from source (import) to sink (load) associated with the registered firm NITS transmission rights that has an assigned CRN for the source and sink locations. The import will be paid the LMP for 100 MW at its location, which includes the marginal congestion component that may be reflective of the effects of one or more transmission constraints. The Load (L) will be charged for 100 MW at the LMP at its location which also may reflect the marginal congestion cost component affected by one or more transmission constraints. The market operator will allocate sufficient congestion revenues to the EDAM balancing area – for the balanced 100 MW self-schedule associated with the firm OATT transmission rights – to be sub-allocated under the EDAM balancing area OATT to provide a greater, more complete, congestion hedge associated with price differences of the LMP at the import and load locations.

Figure 2 builds on the scenario in the example above, but with illustrative LMP values to reflect how parallel flow congestion revenue allocation would occur to the EDAM balancing area to enable the provision of a congestion revenue sub-allocation under the terms of the OATT.

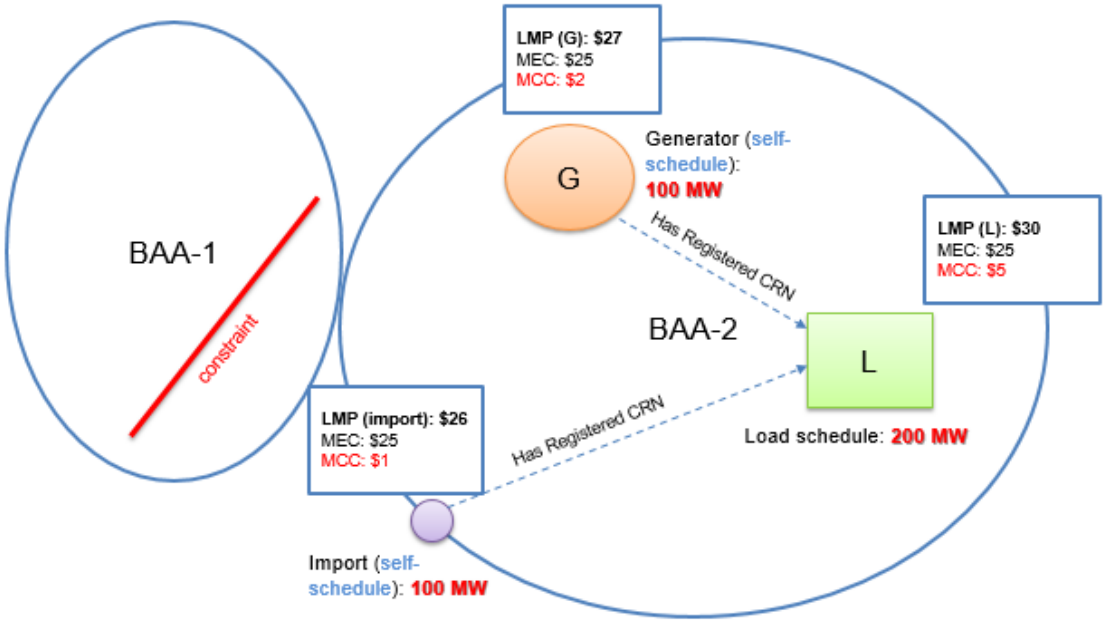


Figure 2: Example of exercise of firm OATT transmission rights through balanced source and sink self-schedules with LMPs.

The LMPs in EDAM BAA-2 are reflected at the respective import, generator (G), and load (L) locations. The MCC component of the LMPs are affected by a transmission constraint located in the adjoining BAA-1 due to the nature of the interconnected transmission system and parallel flow effects described earlier in this proposal. The import will be paid at the $26 LMP (total $2,600), while generator (G) will be paid the $27 LMP (total $2,700). The load (L) will be charged the $30 LMP (total $6,000 for 200 MW). Thus, in total the load serving entity (through a scheduling coordinator) was paid $5,300 for the generation ($2,700 for the import + $2,600 for the generator G energy) and was charged $6,000 at the load. The difference of $700 that the market operator collected as a result of the payments to the import and generator (G) and what it charged the load (L) is parallel flow congestion revenue driven by the MCC price difference in the LMPs resulting from the effects of the transmission constraint in the neighboring BAA-1 balancing area. The market operator allocates the $700 among EDAM balancing areas, and under the Final Proposal will allocate the full $700 to the balancing area where these congestion revenues resulting from parallel flow effects were collected, *i.e.*, BAA-2. The BAA-2 entity then would further sub-allocate these to the transmission customers exercising their firm OATT transmission rights based on balanced source/sink self-schedules, for example to the load serving entity in this case as the NITS transmission customer. While the transmission customer did originally pay $700 more than it got paid, the $700 of congestion revenue that was allocated by the market operator back to the EDAM entity as congestion revenue and which is subsequently sub-allocated by the EDAM entity to the transmission customer offsets the congestion cost exposure.

The Figure 3 example illustrates a scenario where a transmission customer with firm PTP transmission rights seeks to wheel through an EDAM area or otherwise export from an internal generator to a non-EDAM balancing area. The example serves as a reminder of how those parallel flow congestion revenues and internal congestion revenues are allocated based on the location of the transmission constraint and the associated exercise of firm OATT transmission rights.

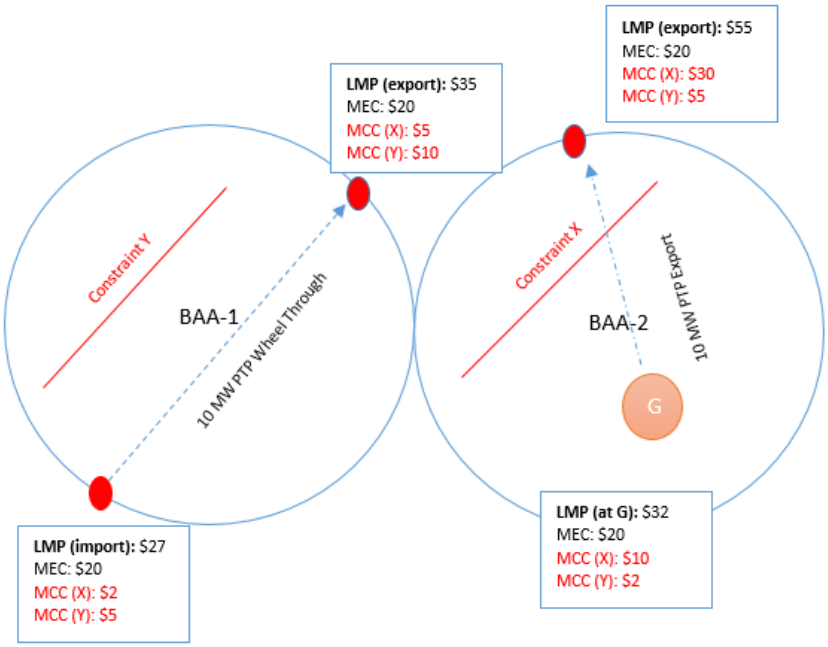


Figure 3: Example of internal congestion revenue and parallel flow congestion revenue allocation associated with exercise of firm OATT transmission rights.

For purposes of this illustrative example, we will assume that the LMP price difference at the different locations is driven by the respective effects of the binding transmission constraints – constraint Y located in BAA-1 which has an effect on the MCC of the LMP at locations in BAA-1 and BAA-2, and constraint X which is located in BAA-2 and has an effect on the MCC of the LMP at locations in BAA-2 and BAA-1.

Turning first to the wheel-through scenario in BAA-1 where a transmission customer holds 10 MW of firm PTP transmission rights from an import to an export location. Under the EDAM design, wheel through transactions through an EDAM area (from non-EDAM area to non-EDAM area) must be self-scheduled at the source (import) and sink (export) locations. Thus, the scheduling coordinator for the transmission customer would submit a self-schedule at the import location in BAA-1, which has a $27 LMP with an MCC component of $7 ($2 associated with constraint X and $5 associated with constraint Y). The scheduling coordinator would also submit a self-schedule at the export location for the same amount (10 MW to be balanced) in BAA-1 which has a $35 LMP with a MCC component of $15 ($5 associated with constraint X and $10 associated with constraint Y). The scheduling coordinator would be paid $270 for the import ($27 LMP for 10 MW) and would be charged $350 at export location ($35 LMP for 10 MW). The net difference of $80 that the scheduling coordinator representing the transmission customer paid is collected as congestion revenue by the market operator and distributed between EDAM balancing areas as this is representative of the $8 LMP difference driven by the impacts of the transmission constraints on the MCC. Under the Final Proposal, the market operator would allocate the $80 of congestion revenue to BAA-1 since the cleared market schedules at the source and sink location are a balanced 10 MW and these schedules are associated with eligible firm OATT PTP transmission rights that the transmission customer has registered with the market operator and has an associated CRN for the source/sink locations. The $80 is representative of the congestion revenue resulting from the constraint internal to BAA-1 (constraint Y) and the parallel flow congestion revenue

resulting in BAA-1 from constraint X located in BAA-2, all associated with the registered firm OATT transmission rights. In turn, BAA-1 would then sub-allocate the $80 to the transmission customer to offset the congestion cost exposure.

Turning to the activities in BAA-2 where the transmission customer holds 10 MW of firm PTP rights to export from the generator (G) to an export location on the BAA-2 system. The generator would submit a balanced self-schedule at the source (G) location and the export location for 10 MW and associated with source/sink registered (with CRN) transmission firm PTP transmission rights. The scheduling coordinator would be paid for the generator (G) output at the $32 LMP (total $320 for 10 MW), while the scheduling coordinator would be charged the $55 LMP at the export location ($550 for 10 MW). The resulting difference between the $550 charge and the $320 payment results in $230 of congestion revenue collected by the market operator for distribution between the EDAM balancing areas. The $230 of congestion revenue represents the congestion revenue associated with congestion effects of the internal constraint in BAA-2 and the congestion revenue associated with parallel flow effects because of the effects of constraint Y located in BAA-1. Under the proposal, the $230 of congestion revenue would be allocated to the EDAM balancing are where the congestion revenue is accrued (collected) which is BAA-2 associated with that exercise of firm OATT transmission rights. In turn, BAA-2 would sub-allocate those revenues under the terms of its OATT to the transmission customer to offset the congestion cost exposure.

To the extent that there were additional parallel flow congestion revenues that were collected within BAA-1 as a result of constraint X in BAA-2, beyond what was allocated to support the exercise of firm PTP transmission rights to support the wheel-through balanced self-schedule, those remaining parallel flow congestion revenues would be allocated to area where the constraint is located, which is BAA-2. Conversely, to the extent there were additional parallel flow congestion revenues that were collected within BAA-2 as a result of constraint Y in BAA-1, beyond what was allocated to support the exercise of firm PTP transmission rights to support the export balanced self schedule, those remaining parallel flow congestion revenues would be allocated to the area where the constraint is located, which is BAA-1.

Appendix 1 of this Final Proposal contains two more comprehensive examples building off the examples discuss with stakeholders and illustrated in the Issue Paper to convey the effects of the proposal. These are the same examples as shared in the Draft Final Proposal and discussed at the April 23rd stakeholder workshop.

d. Eligible firm PTP and NITS transmission rights

As described earlier, the eligible transmission rights for the congestion revenue allocation associated with parallel flows when exercised through a balanced source/sink self-schedule consist of long-term firm and monthly firm PTP and NITS OATT transmission rights, including conditional firm, consistent with the OATT revisions of EDAM entities. These transmission rights will be registered with the market operator, indicating the relevant information (i.e., source/sink, duration, MW) supporting the exercise of those transmission rights. Once registered, the transmission rights will be assigned a CRN which can be utilized as an identifier when submitting a self-schedule to denote the exercise of registered transmission rights.

PTP transmission rights have specific source and sink associations as part of the transmission reservation. To exercise those transmission rights, the scheduling coordinator for the transmission

customer would submit a self-schedule at the source and sink locations with a CRN (whether wheel through or export for example) and the market operator would allocate parallel flow congestion revenues associated with the cleared balanced schedule to the EDAM entity to sub-allocate under the terms of their OATT.

The NITS transmission rights may be, depending on the different practices across transmission providers in the West, more nuanced in how they are established and the associated source and sink locations for the transmission reservation. Some NITS transmission rights, for example, for designated network resource may be associated with one specific source or in some circumstances may be associated with multiple resources. Similarly, depending on the structure of loads within the balancing area the sink may be a specific load or multiple load locations, or an aggregation. The Masterfile registration process can map the NITS transmission rights in these situations, accurately reflecting the nature of the transmission rights that a transmission provider confers under their OATT. Once the NITS transmission rights are registered and obtain a CRN, these can be exercised in the same way as PTP rights – through a balanced source/sink self-schedule.

e. Application in the Day-Ahead Market

The proposal of the described parallel flow congestion revenue allocation mechanism proposes application to the day-ahead market only, and not the real-time market. The EDAM is a voluntary day ahead market where WEIM entities can extend participation to EDAM or remain and participate only in WEIM. Applying this proposal to the real-time market would affect the allocation of congestion revenue between WEIM-only participants. Additionally, extending the proposal would be impractical as the WEIM is a different market where transmission rights are not registered or reflected in the same manner as in EDAM. The WEIM also allows base scheduling of generation which is not settled through the market, and this would limit the ability to effectively apply the proposed design. Moreover, a key driver for this initiative is application of congestion revenues in the EDAM and day-ahead context, to support derivation of a more complete congestion hedge as provided under the EDAM entity OATT. Traditional organized market designs provide a congestion hedge only in the day-ahead market and not the real-time market. In the WEIM, congestion revenue allocation would remain as it is today with congestion revenues flowing to the balancing area where the transmission constraint is located.

f. Effect of proposal on CRRs in the CAISO balancing area

The CAISO balancing area does not offer PTP or NITS transmission service products under its tariff. Rather, it offers a single type of transmission service (new firm use) and enables allocation and auction of CRRs based on specific source/sink locations on the CAISO system to manage congestion price exposure observed in the day-ahead market. Currently, the CRR financial rights mechanism is only a feature within the CAISO balancing area and not the wider EDAM footprint. CRRs are allocated to load serving entities through an annual and monthly allocation processes and can be further acquired through annual and monthly auction processes by other types of market participants. The CRR allocation and auction processes include a simultaneous feasibility test to ensure CRR that are released are feasible and are funded relative to the expected network topology and capacity. CRRs are settled at each constraint where CRR source and sink balanced schedules have a contribution to that constraint. The CRR constraint settlement is based upon the amount of congestion revenue collected from the product of the CAISO day ahead energy and imbalance reserve awards contribution and the relevant constraint shadow price.

Since the CAISO balancing area does not offer comparable PTP and NITS transmission products, under this proposal the CAISO balancing area may not be allocated parallel flow congestion revenues at the launch of EDAM associated with parallel flow effects of constraints in a neighboring area. This design element, or asymmetry, will be rectified and eliminated under the near-term design and implementation enhancement that the ISO is committed to evaluating and undertaking as a year one enhancement. It will not be available at the outset of EDAM because it requires further consideration with stakeholders and additional system changes. Nonetheless, it is important to proceed with EDAM implementation to capture the benefits for all customers sooner rather than later.

However, there are several mitigating factors that limit the effects of this temporary asymmetry on the CAISO balancing area. First, the ISO is in the process of evaluating CRR modeling through the annual and monthly processes to improve accuracy and awards of CRRs in the CAISO balancing area. Considering the introduction of EDAM and the associated effects of schedules and flows on CAISO system constraints, the CRR release processes will have to consider, among other things, how to account for firm OATT transmission rights across neighboring EDAM balancing areas to support and ensure that the CAISO releases feasible CRR awards at locations impacted by use of OATT transmission rights and overall schedules across these areas. As the ISO undertakes this modeling review effort as part of the CRR release process, it will engage and discuss with stakeholders modeling assumptions and implications through the annual and monthly CRR release processes.

Second, with the introduction of the EDAM and as part of this proposed design, the CAISO will be allocated additional congestion revenues which it does not receive today, and these can support continued payout and revenue sufficiency for funding CRRs. Today, pre-EDAM, the CAISO balancing area may be affected by parallel flow effects from neighboring balancing areas which are not part of the market footprint. These parallel flow effects can affect congestion on the CAISO system and resulting impacts on congestion prices, along with the payout of CRRs. However, today, the CAISO balancing area does not receive supporting congestion revenues from these neighboring areas to account for these congestion price effects. In EDAM, as a balancing area joins the day-ahead market, and as described in this proposal, to the extent a transmission constraint within the CAISO balancing area is affected by schedules in a neighboring EDAM balancing area, a portion of the parallel flow congestion revenues materializing in the neighboring EDAM balancing area will be allocated to the CAISO (the remaining parallel flow congestion revenues after allocating revenues for balanced self-schedules exercising eligible firm PTP and NITS transmission rights). These additional congestion revenues will flow to the CAISO CRR balancing account which helps fund CRR settlement, putting downward pressure and reducing CRR underfunding risk.

It is important to acknowledge that the modeling enhancements and CRR accuracy improvements are driven by movement to the EDAM and not driven by this narrowly tailored initiative. Even under the existing, FERC-approved, design for congestion revenue allocation there is a need and opportunity to model neighboring EDAM balancing area conditions in allocating CRRs in the CAISO balancing area and discuss the settlement of CRRs in EDAM. Thus, this element of continued CRR modeling enhancements is seen as a related, but a different scope item unique to the CAISO balancing area, which will be further discussed leading up to the release of annual CRRs through existing release forums.

B. Continued design evolution: near-term and long-term EDAM congestion revenue design

The EDAM establishes a unique market structure where participating balancing areas and transmission providers continue to retain the administration of their OATTs, continue to sell transmission service under their OATTs, and manage the reliability function for the balancing area. The EDAM, as well as the WEIM, does not stop or otherwise preclude the sale of transmission service nor does it mandate differentiation of transmission rights pre and post EDAM participation.

OATT transmission service is awarded without fully accounting for parallel flow effects on adjoining systems. In evaluating a request for OATT transmission service, a transmission provider will evaluate the transmission capability on its own transmission system in determining whether the request for OATT service can be accommodated without necessarily directly considering the effects of that request or resulting flow effects on the neighboring system or the availability of transmission capability on the neighboring system. Similarly, the neighboring transmission provider may make sales of OATT transmission on its system without considering the parallel flow effects on its neighboring system. Simultaneous utilization of the reserved OATT transmission rights can contribute to the overload of transmission constraints across the interconnected systems in part based on parallel flow effects. Nevertheless, transmission providers across the West have developed different strategies for managing and mitigating the risk of resulting infeasibilities including adjustments to the Available Transfer Capability (ATC) calculations, coordination on evaluation of some long-term requests depending on the interconnected nature of systems, reliance on curtailments of transmission service, redispatch procedures, or other actions that provide the necessary loading relief to resolve the constraint.

As currently designed, the EDAM intentionally does not include a congestion revenue rights (CRR) or financial transmission rights (FTR) design outside of the CAISO. Introduction of such designs across other markets has traditionally been accompanied by the conversion of firm transmission service to these rights for those who have paid the embedded costs of the transmission system. This was also accompanied by stopping further sales of transmission service by individual transmission providers, introduction of a simultaneous feasibility assessment and consolidation of the transmission sales administration function to the market operator along with the establishment of a market-wide transmission usage charge. The EDAM does not make such changes, but as noted earlier, transmission providers and balancing authorities continue to retain their reliability functions and administer sale of transmission service under their respective OATTs. Operations of the EDAM can establish market operational experience for participants and illuminate the effects of continued OATT sales on the market and the effect of the market on OATT sales, all which will help inform evolution of the EDAM design and future consideration of different congestion revenue allocation or congestion hedging market mechanisms.

A key aspect raised by a number of stakeholder comments was a concern that EDAM entities may continue to make OATT transmission sales after joining EDAM creating an impetus for promptly transitioning to a long-term design or considering other sunset provisions or narrower measures. Their concern is that these continued sales of eligible firm PTP and NITS transmission rights could continue to exacerbate parallel flow congestion pricing impacts without consequence and lead to establishment of an ongoing congestion hedge. The ISO recognizes that it will be important in the next stage of the stakeholder process to consider a long-term design to evaluate treatment of continued sales of OATT transmission rights, their treatment for purposes of congestion revenue allocation, and their effect on

parallel flows as part of a spectrum of options. Nevertheless, it is important to contextualize this risk in the broader realities of the Western transmission systems which are substantially if not already fully subscribed, based on existing transmission ratings, for long-term firm OATT transmission (whether PTP or NITS) mitigating some of the ongoing effect of continued OATT sales post-EDAM participation. Additionally, while there is no West-wide simultaneous feasibility evaluation, as noted earlier transmission providers across the West have established limits on sales of long-term firm transmission service through their ATC methodologies which apply margins for reliability and uncertainty, including for loop flow effects. This mitigates the risk that for long-term firm transmission products, which under the phased proposal would be eligible for congestion revenue allocation, neighboring transmission providers would be selling the transmission capability up to the full rating of a line. Finally, the consideration of the effect of new OATT sales on loop flow, contributions to congestion, and congestion revenue allocation is not only a consideration for the EDAM entities providing sales of transmission service under the OATT but also for the CAISO balancing area. As loads in the West continue to grow, EDAM entities may make continued OATT sales depending on availability of transmission products, and the CAISO may experience increased utilization through new firm use across its system due to load growth – all which may have parallel flow effects and can contribute to congestion on the neighboring grids.

The ISO and market participants will continue to work together, through stakeholder working groups, to evaluate and consider a spectrum of potential near-term enhancements and long-term congestion revenue allocation or congestion hedging mechanisms that could be considered after the launch of EDAM. Under traditional organized market CRR and FTR designs, the allocation of financial hedging mechanisms includes consideration of the simultaneous feasibility of all the awarded transmission rights flowing and if these cannot be accommodated simultaneously, there are reductions to the allocation such that the amount a financial hedge mechanism provided may be less than the amount of transmission rights held. Those types of financial rights designs are on one end of the spectrum, take time and significant complexity to develop.

These types of enhancements across a spectrum of incremental improvements can be considered as near-term enhancements or as part of a long-term evolution to the design, informed by stakeholder input, market data and market experience. Efforts associated with these considerations will be ongoing, along with data monitoring and transparent sharing of information.

a. Data monitoring and transparency

Informed by stakeholder input, the ISO continues to believe it is important to monitor the effects of the proposed design. In particular, the ISO would monitor the following information:

- Identification of the binding transmission constraints, and their frequency, in each EDAM balancing area.
- Effects of binding transmission constraints on congestion prices within the EDAM balancing area in which the constraint is located and in neighboring EDAM balancing areas.
- Allocation of congestion revenues among EDAM balancing areas resulting from these constraints.
- Magnitude and frequency of self-schedules across EDAM balancing areas, including self-schedules exercising firm OATT transmission rights (associated with use of CRN), NITS and PTP transmission rights registered with the market operator.

As the data and information is collected during EDAM operations, the ISO will transparently share the information described above to support evaluation of near-term and long-term incremental design enhancements through the following methods:

- EDAM operational reports which focus on a range of aspects during the first year of EDAM operations.
- Sharing of data during the quarterly Market Planning and Performance Forum (MPPF) which provides information on a range of topics, including ongoing EDAM operations.

Independent from the ISO data, monitoring and reporting, the ISO Department of Market Monitoring (DMM) will produce data and information on EDAM operations. As with the data and reporting produced for the WEIM, the DMM will monitor aspects of EDAM congestion that will be part of their quarterly and annual reports providing further transparency to congestion related information.

In comments across proposals, stakeholders supported the identified monitoring categories and the forums through which these results will be provided transparently. As the information is collected with the launch of EDAM, there may be additional data or information that may provide value and there will be opportunities to identify additional data elements for consideration.

b. Evaluation of near-term enhancements and a long-term design for congestion revenue allocation

The proposed design for parallel flow congestion revenue allocation will establish a baseline design to build upon through continued stakeholder engagement on further near-term enhancements and a long-term design, with opportunity to consider a spectrum of design alternatives. The ISO is committed to continued robust engagement on the evolution of the congestion revenue allocation design. To that end, the ISO will continue to engage stakeholders and re-initiate working groups on this topic prior to EDAM launch in May of 2026. This will allow the stakeholder community to come together to re-initiate discussions in considering near-term enhancements, particularly an enhancement that enables parallel flow congestion revenue allocation based on economic bidding and eliminates the CAISO balancing area asymmetry as described earlier and considers a spectrum of long-term designs including review of EDAM principles and consideration of any new or additional principles guiding the establishment of a long-term design. Throughout those discussions, additional and different enhancement approaches can be introduced and considered.

To support continued incremental evolution including near-term and long-term enhancements, the ISO proposes the following activities and timelines to continue engagement and evaluation of near-term enhancements and a long-term design informed by stakeholder input:

- Stakeholder working groups launch in 2026, prior to EDAM go-live. The working groups would commence with consideration of the near-term enhancements and focus on long-term design principles based on existing EDAM principles on the topic and any additional or different principles that may be identified. The working groups would then shift toward consideration of a spectrum of potential design options and careful consideration of these, which can be informed by market operational experience and data monitoring described earlier.
- The stakeholder process would be conducted over a 12 to 24 month period allowing room for evaluation of different designs and complexity based on the level of consensus development. At the conclusion of this stakeholder process, the ISO would present a proposal to the governing

entity for consideration. During the stakeholder process, the ISO will provide quarterly updates to the governing entity on the status of the initiative, implementation timelines associated with relevant designs considered, and reporting on data monitoring described earlier on congestion patterns across the EDAM footprint.

- The resulting proposal and the tariff revisions would be filed with FERC for approval, and the ISO would strive to implement the design by the third year of EDAM operations (2029) considering the structure and complexity of the chosen design.

The more detailed description of the stakeholder engagement timelines is intended to provide stakeholders with confidence that the ISO and the stakeholder community will engage promptly in an open and transparent stakeholder process in evaluating a long-term design informed, in part, by EDAM operational experience.

C. Near-term enhancement consideration: supporting economic bidding

The ISO is committed to continuing to pursue and evaluate the development and implementation of enhancements to the design proposed in this document which could be implemented in the in the first year, or soon thereafter, of EDAM operations (2027). In comments to the Draft Final Proposal and the Revised Draft Final Proposal, market participants expressed sizable support for an enhancement that would provide additional flexibility and mitigate potential self-scheduling incentives by enabling allocation of congestion revenue associated with parallel flow based on cleared balance day-ahead market schedules, whether these were self-scheduled or economically bid associated with eligible firm PTP and NITS transmission rights. This concept was introduced by the ISO in the Draft Final Proposal and garnered sizable stakeholder support. Beyond the added flexibility and the potential to mitigate or reduce self-scheduling incentives, this design also provides the ability for the CAISO balancing area to retain parallel flow congestion revenues associated with a constraint in a neighboring EDAM balancing area, thus eliminating the asymmetry that may exist under the broader current proposal.

Implementation of this type of design requires additional systems and functionality changes that would not be ready by EDAM launch in 2026, while also requiring additional vetting with stakeholders on the structure of the design. The ISO commits to evaluate this design and move toward implementation pending further vetting and stakeholder feedback on this design through the stakeholder process.

a. Design description

The near-term enhancement design can be summarized as follows:

- Parallel flow congestion revenues accruing within an EDAM balancing area due to a binding transmission constraint in another EDAM balancing area, will be allocated by the market operator to the EDAM balancing area where the congestion revenues are collected (not where the transmission constraint is located) for the exercise of eligible firm PTP and NITS transmission rights for cleared balanced day-ahead market schedules, whether self-scheduled or economically bid. This enhancement reduces or mitigates concerns with incentives to self-schedule in the day-ahead market.
- For the CAISO balancing area, since it does not offer PTP and NITS service, the market operator will leverage the Congestion Revenue Rights (CRR) functionality to allocate congestion revenues associated with parallel flows to the CAISO balancing area, resulting from a binding transmission

constraint in a neighboring EDAM balancing area, based on the settlement of source/sink CRRs released in the annual and monthly, allocation and auction processes.

This near-term enhancement enables parallel flow congestion revenue allocation based on economically bid balanced cleared market schedules associated with eligible firm PTP and NITS transmission rights, including Conditional Firm transmission, consistent with the baseline proposal in this Final Proposal. This enhancement, introduced initially within the Draft Final Proposal as a possible future enhancement, was widely supported in the written stakeholder comments and it is thus described in more detail how it could be structured to help frame understanding of the potential design and set the stage for forthcoming continued discussions on the near-term design as described earlier.

Under this enhancement, the market operator will allocate parallel flow congestion revenues based on balanced cleared schedules between the source/sink locations. For example, in the context of load service and NITS transmission, designated network resources could economically bid their output and economically bid their load, and for the balanced cleared day-ahead portion of the schedules the market operator would allocate congestion revenues associated with parallel flows to the EDAM entity to sub-allocate to the transmission customer under the terms of their OATT. Remaining parallel flow congestion revenues that may accrue would be allocated to the EDAM balancing area where the transmission constraint is located.

The proposed enhancement would also apply to scheduling associated with Transmission Ownership Rights/Existing Transmission Contracts (TOR/ETC) – legacy transmission contracts – which could also submit day-ahead economic bids at source/sink locations associated with those transmission rights, and would enable allocation of associated parallel flow congestion revenues to these directly from the market operator. The application of the enhancement to TORs/ETCs would further improve market efficiency by supporting economic bidding.

b. Comparability for the CAISO Balancing Area and CRRs

Within the CAISO balancing area, CRRs are allocated and auctioned off in annual and monthly increments as financial instrument which allow holders of these instruments to receive payment, or potentially charges, based on congestion revenues/rents generated (positive or negative) as a result of transmission constraints on the transmission system. CRRs are congestion cost hedge mechanism available in the day-ahead market within the CAISO balancing area. With *CRR 1B enhancements* a few years ago, the CRRs allocated within the CAISO balancing area reflect transmission constraints across the wider market footprint which, with the introduction of EDAM in 2026, will expand beyond the CAISO balancing area. At that point, transmission constraints in the broader EDAM market footprint can affect congestion prices in the CAISO balancing area and these constraints will also be modeled within the CRR allocation process. The introduction of EDAM can improve modeling of transmission constraints across participating balancing areas and consequently will also further inform the CRR modeling and allocation process within the CAISO balancing area, including allocation of congestion revenues that the CAISO does not receive today which can further support allocation within the CAISO and CRR revenue sufficiency.

An important consideration as part of the enhancement is symmetry and comparability between the allocation of parallel flow congestion revenues for balanced cleared schedules associated with eligible firm PTP and NITS transmission rights in EDAM balancing areas and allocation with the CAISO balancing area which does not offer PTP and NITS transmission products. As the CAISO balancing area does not

offer these types of OATT transmission products, the comparable element is the CAISO balancing area allocation of CRRs in annual and monthly increments.

Under this enhancement, to ensure symmetry and comparability in allocations, the CAISO balancing area would retain parallel flow congestion revenues resulting from a transmission constraint in a neighboring EDAM balancing area with effectiveness on CAISO day ahead energy and imbalance reserve schedules in order to sufficiently provide the necessary congestion hedge for annual and monthly CRRs affected by the binding transmission constraint. Remaining parallel flow congestion revenues which accrue in the CAISO balancing area, beyond what is needed to provide and support funding of CRRs affected by the constraint, will be allocated to the EDAM balancing area where the transmission constraint is located.

IX. Stakeholder Process and Decisional Classification

A. Stakeholder engagement

This stakeholder initiative has followed an expedited schedule informed by stakeholder participation in workshop discussions as well as written stakeholder comments. The publication of this issue paper on March 17th represented the start of the initiative. The Draft Final Proposal was published on April 16th introduced a formal proposal for stakeholder input and feedback. The Revised Draft Final Proposal, published on May 19th, provided further incremental refinements and enhancements to the proposal informed by stakeholder comments. This Final Proposal describes the full proposal as shaped by the iterative proposals before it and the stakeholder comments received.

The following represent the target upcoming milestones:

- March 17th – Publication of *EDAM Congestion Revenue Allocation* issue paper.
- March 24th – Stakeholder workshop on published Issue Paper.
- April 7th – Stakeholder comments deadline for Issue Paper and workshop.
- April 14th – Publication of Draft Final Proposal on *EDAM Congestion Revenue Allocation.*
- April 23rd – Stakeholder workshops to discuss the Draft Final Proposal.
- May 5th – Stakeholder comments deadline for the Draft Final Proposal and associated workshops.
- May 19th – Publication of Revised Draft Final Proposal informed by stakeholder comments.
- May 27th – Stakeholder workshop on Revised Draft Final Proposal.
- June 2nd – Stakeholder comments on Revised Draft Final Proposal.
- June 6th – Publication of Final Proposal.
- June 19th – Presentation for decision to ISO Board of Governors and WEM Governing Body.

A. Decisional classification

This initiative considers possible solutions to concerns with the EDAM design for congestion revenue allocation between EDAM balancing areas. ISO staff believes that any proposed tariff changes that emerge from this stakeholder process will be subject to the joint authority of the Board of Governors and the WEM Governing Body.

The Board and the WEM Governing Body have joint authority over any

> proposal to change or establish a tariff rule applicable to the WEIM/EDAM Entity balancing authority areas, WEIM/EDAM Entities, or other market participants within the WEIM/EDAM Entity balancing authority areas, in their capacity as participants in the WEIM/EDAM. The WEM Governing Body will also have joint authority with the Board of Governors to approve or reject a proposal to change or establish any tariff rule for the day-ahead or real-time markets that directly establishes or changes the formation of any locational marginal price(s) for a product that is common to the overall WEIM or EDAM markets. The scope of this joint authority excludes, without limitation, any other proposals to change or establish tariff rule(s) applicable only to the CAISO balancing authority area or to the CAISO-controlled grid. Note: For the avoidance of any doubt, that the joint authority definition is not intended to cover balancing authority-specific measures, such as any parameters or constraints, the CAISO may use to ensure reliable operation within its balancing authority area.

Charter for WEM Governance § 2.2.1. Any tariff changes that are proposed because of this process would be "applicable to WEIM/EDAM Entity balancing authority areas, WEIM/EDAM Entities, or other market participants within WEIM/EDAM Entity balancing authority areas, in their capacity as participants in WEIM/EDAM." We do not expect they would be applicable "only to … the CAISO-controlled grid." Accordingly, these proposed changes to implement these enhancements should fall within the scope of joint authority.

This proposed classification may evolve as this process develops. Stakeholders are encouraged to submit a response in their written comments to the proposed classification as described above.

Appendix 1 – Additional Examples Illustrating the Proposal

This appendix is intended to provide continuity in examples with the more complex illustrative examples presented in the Issue Paper and stakeholder workshop to convey the evolution and effect of the proposal as described in section VIII of this document. Within the Issue Paper, the ISO presented two illustrative multi-Balancing Authority Area examples: Predominant Flow example and Counter flow example. These examples demonstrate the distribution of internal physical congestion and parallel flow physical congestion to EDAM BAAs, including the CAISO BAA, based on the current FERC-approved EDAM design, the transitional alternative introduced in the Issue Paper, and the approach described in this Final Proposal.

As described in section VIII of this Final Proposal, the proposal is to identify the congestion revenue associated with exercised monthly and long-term firm OATT rights via balanced source/sink self-schedules with associated contract reference number (CRN). The market operator would distribute the balanced CRN Congestion revenue, associated with balanced source/sink self-schedules, including congestion revenue associated with parallel flows, to the EDAM Entity of the BAA where the self-schedule is awarded. The proposal would retain the EDAM filed tariff congestion revenue distribution for the portion of congestion revenue collected through the settlement of non-CRN self-schedules and economic market schedules. Thus, parallel flow congestion revenues beyond what is associated with balanced source/sink self-schedules exercising the firm OATT transmission rights (which are allocated to the balancing area where these are revenues are collected) would be allocated to the balancing area where the transmission constraint is located.

The following discussion will provide a comparison of the congestion distribution under the current EDAM design, the transitional alternative introduced in the Issue Paper, and the proposed refined design described in this Final Proposal.

1. **Predominant Flow Example**

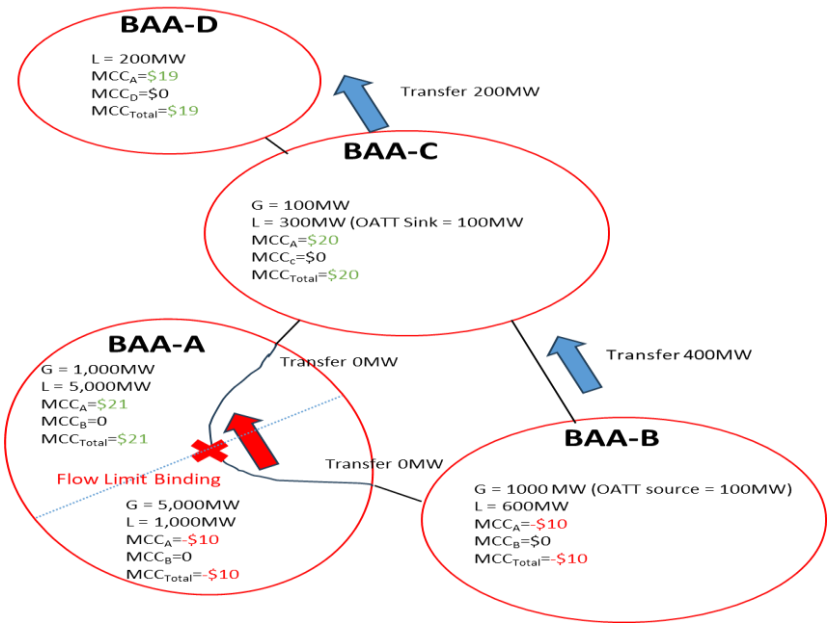


Figure 1: Predominant Flow Solution when BAA A has Binding Constraint South to North

In the predominant flow example, an internal constraint within BAA A is binding from South to North that impacts the energy schedules as well the marginal cost of congestion component (MCC) of locational marginal prices (LMP) associated with energy schedules. In this example, Generation in BAA A, BAA B, and BAA C was scheduled to serve load in BAA A, BAA B, BAA C, and BAA D with the overall flow of energy schedules is from South to North (Figure 1).

In BAA A, 6,000 MWs of internal generation has been dispatched to serve the 6,000 MWs of internal load. Of the 6,000 MWs supply dispatch, 1,000 MWs of generation south of the constraint served 1,000 MWs of load south of the constraint. An additional, 4,000 MWs of supply south of the constraint was dispatched to serve 4,000 MWs of BAA A load north of the constraint. The remaining 1,000 MW of BAA A load north of the constraint was served by generation north of the constraint.

In BAA B, 1,000 MWs of internal generation, including 100 MWs of OATT self-schedules, was dispatched to serve 600 MWs of internal load as well as 400 MWs of export transfer out of BAA B to BAA C, including a 100 MWs TC self-scheduled OATT Transfer.

In BAA C, 100 MWs of internal generation was dispatched to meet 100 MWs of internal load while the remaining 200 MWs load was served through the transfer of energy from BAA B to BAA C, including 100 MWs of OATT self-schedules. The remaining 200 MWs of transfer energy from BAA B was subsequently transfer from BAA C to BAA D to serve 200 MWs of load in BAA D.

In the predominant flow example, the Marginal Energy Cost (MEC) is equal across the footprint and priced at $20. However, power flow congestion assessment indicates that all energy schedules in EDAM BAAs external to BAA A have an effectiveness contribution on the binding constraint in BAA A. Depending upon effectiveness of the schedule on the constraint and relationship to the constraint, contributing or resolving the congestion, the subsequent impact on the MCC component of the nodal LMPs varies. In short, supply and demand south of the constraint has a negative MCC price, $(10), while the supply and load north of the binding constraint has a MCC, $21, $20, and $19 for BAA A, BAAC, and BAA D, respectively. Table 1 represents a summary of the dispatches and corresponding prices.

Table 1: Predominant flow awards and prices

		MW	LMP	MEC	MCC_A	MCC_B	MCC_C	MCC_D
BAA A	G_N	1,000	$41.00	$20.00	*$ 21.00*	$ -	$ -	$ -
	L_N	(5,000)	$41.00	$20.00	*$ 21.00*	$ -	$ -	$ -
	G_S	5,000	$10.00	$20.00	*$(10.00)*	$ -	$ -	$ -
	L_N	(1,000)	$10.00	$20.00	*$(10.00)*	$ -	$ -	$ -
	T_{AB}	-	$20.00	$20.00	$ -	$ -	$ -	$ -
	T_{AC}	-	$20.00	$20.00	$ -	$ -	$ -	$ -
BAA B	G_{OATT}	100	$10.00	$20.00	*$(10.00)*	$ -	$ -	$ -
	G	900	$10.00	$20.00	*$(10.00)*	$ -	$ -	$ -
	L	(600)	$10.00	$20.00	*$(10.00)*	$ -	$ -	$ -
	T_{AB}	-	$20.00	$20.00	$ -	$ -	$ -	$ -
	$T_{BC(OATT)}$	(100)	$20.00	$20.00	$ -	$ -	$ -	$ -
	T_{BC}	(300)	$20.00	$20.00	$ -	$ -	$ -	$ -

BAA C	G	100	$40.00	$20.00	*$20.00*	$ -	$ -	$ -
	L_{OATT}	(100)	$40.00	$20.00	*$20.00*	$ -	$ -	$ -
	L	(200)	$40.00	$20.00	*$20.00*	$ -	$ -	$ -
	T_{AC}	-	$20.00	$20.00	$ -	$ -	$ -	$ -
	$T_{BC(OATT)}$	100	$20.00	$20.00	$ -	$ -	$ -	$ -
	T_{BC}	300	$20.00	$20.00	$ -	$ -	$ -	$ -
	T_{CD}	(200)	$20.00	$20.00	$ -	$ -	$ -	$ -

BAA D	G	-	$39.00	$20.00	*$19.00*	$ -	$ -	$ -
	L	(200)	$39.00	$20.00	*$19.00*	$ -	$ -	$ -
	T_{CD}	200	$20.00	$20.00	$ -	$ -	$ -	$ -

Table 2 provides a summary of the settlement of the market schedules including 100 MWs of exercised firm OATT transmission right as CRN self-schedules. Based upon the market settlement, BAA A net MCC settlement is $(124,000) where BAA A generation receive payments $91,000 while BAA A load is charged $(215,000). For BAA B, the net settlement is $(4,000) where BAA B generation receive payments $10,000, BAA B load is charged $(6,000), and BAA B net transfer settlement is a charge of $(8,000). For BAA C, the net settlement is $(4,000) where BAA C generation receive payments $4,000, BAA C load is charged $(12,000), and BAA C net transfer settlement charge of $4,000. Finally, BAA D's net settlement is $(3,800) where BAA D generation, which was not dispatched, receives a payment of $0, BAA D load is charged $(7,800), and BAA D net transfer settlement is $4,000.

Overall, the market footprint net settlement is an over-collection in congestion revenue of $(135,800). In tables Table 3, Table 4, and Table 5, the ISO will compare the congestion revenue distribution under EDAM current design, transitional alternative introduced in the Issue Paper, and the design in this Final Proposal issue paper respectively.

Table 2: Predominant flow settlement

		LMP	MEC	MCC_A	MCC_B	MCC_C	MCC_D
BAA A	G_N	**$41,000**	**$20,000**	*$21,000*	$ -	$ -	$ -
	L_N	**$(205,000)**	**$(100,000)**	*$(105,000)*	$ -	$ -	$ -
	G_S	**$50,000**	**$100,000**	*$(50,000)*	$ -	$ -	$ -
	L_N	**$(10,000)**	**$(20,000)**	*$10,000*	$ -	$ -	$ -
	T_{AB}	**$ -**	**$ -**	*$ -*	$ -	$ -	$ -
	T_{AC}	**$ -**	**$ -**	*$ -*	$ -	$ -	$ -
BAA A STLMT		**$(124,000)**	**$ -**	*$(124,000)*	$ -	$ -	$ -

BAA B	G_{OATT}	**$1,000**	**$2,000**	*$ (1,000)*	$ -	$ -	$ -
	G	**$9,000**	**$18,000**	*$(9,000)*	$ -	$ -	$ -
	L	**$(6,000)**	**$(12,000)**	*$ 6,000*	$ -	$ -	$ -
	T_{AB}	**$ -**	**$ -**	*$ -*	$ -	$ -	$ -
	$T_{BC(OATT)}$	**$(2,000)**	**$(2,000)**	*$ -*	$ -	$ -	$ -
	T_{BC}	**$(6,000)**	**$(6,000)**	*$ -*	$ -	$ -	$ -

BAA B STLMT		**$(4,000)**	**$ -**	*$(4,000)*	*$ -*	*$ -*	*$ -*

BAA C	G	**$4,000**	**$2,000**	*$2,000*	*$ -*	*$ -*	*$ -*
	L_{OATT}	**$(4,000)**	**$(2,000)**	*$(2,000)*	*$ -*	*$ -*	*$ -*
	L	**$(8,000)**	**$(4,000)**	*$(4,000)*	*$ -*	*$ -*	*$ -*
	T_{AC}	**$ -**	**$ -**	*$ -*	*$ -*	*$ -*	*$ -*
	$T_{BC(OATT)}$	**$2,000**	**$2,000**	*$ -*	*$ -*	*$ -*	*$ -*
	T_{BC}	**$6,000**	**$6,000**	*$ -*	*$ -*	*$ -*	*$ -*
	T_{CD}	**$(4,000)**	**$(4,000)**	*$ -*	*$ -*	*$ -*	*$ -*
BAA C STLMT		**$(4,000)**	**$ -**	*$ (4,000)*	*$ -*	*$ -*	*$ -*

BAA D	G	**$ -**	**$ -**	*$ -*	*$ -*	*$ -*	*$ -*
	L	**$(7,800)**	**$(4,000)**	*$(3,800)*	*$ -*	*$ -*	*$ -*
	T_{CD}	**$4,000**	**$4,000**	*$ -*	*$ -*	*$ -*	*$ -*
BAA D STLMT		**$(3,800)**	**$ -**	*$(3,800)*	*$ -*	*$ -*	*$ -*

In the EDAM current FERC-approved design, the congestion revenue is allocated to the BAA where the constraint is modeled (Table 3).

Table 3: Current Marginal Cost of Congestion distribution of predominant flow

MCC OFFSET	**MCC_T**	**MCC_A OFFSET by Breakdown**	**MCC_B OFFSET by Breakdown**	**MCC_C OFFSET by Breakdown**	**MCC_D OFFSET by Breakdown**
BAA_A MCC Total	**$(124,000)**	$(124,000)	$ -	$ -	$ -
BAA_B MCC Total	**$(4,000)**	$(4,000)	$ -	$ -	$ -
BAA_C MCC Total	**$(4,000)**	$(4,000)	$ -	$ -	$ -
BAA_D MCC Total	**$(3,800)**	$(3,800)	$ -	$ -	$ -
Overall STLMT	**($135,800)**	**($135,800)**	**$ -**	**$ -**	**$ -**
Congestion Allocation	**$135,800**	**$135,800**	**$ -**	**$ -**	**$ -**

The transitional alternative introduced in the Issue Paper allocates congestion revenue/rents to the BAA where the congestion was collected or paid (Table 4). Internal congestion revenue because of an internal transmission constraint already stays within the BAA, but the transitional alternative considered also keeping all the parallel flow congestion revenues in the BAA irrespective of the location of the transmission constraint.

Table 4: Transitional approach (Issue Paper) for predominant flow of Marginal Cost of Congestion distribution

MCC OFFSET	**MCC_T**	**MCC_A OFFSET by Breakdown**	**MCC_B OFFSET by Breakdown**	**MCC_C OFFSET by Breakdown**	**MCC_D OFFSET by Breakdown**
BAA_A MCC Total	**$(124,000)**	$(124,000)	$ -	$ -	$ -

BAA_B MCC Total	**$(4,000)**	$ -	$(4,000)	$ -	$ -
BAA_C MCC Total	**$(4,000)**	$ -	$ -	$(4,000)	$ -
BAA_D MCC Total	**$(3,800)**	$ -	$ -	$ -	$(3,800)
Overall STLMT		**$(124,000)**	**$(4,000)**	**$(4,000)**	**$(3,800)**
Congestion Allocation		**$124,000**	**$4,000**	**$4,000**	**$3,800**

Under the design of this Final Proposal, the congestion revenue associated to balanced OATT self-schedules in BAA B and BAA C is allocated to the EDAM Entity of the BAA where OATT rights are exercised. The EDAM Entity will consider this congestion revenue when providing the further sub-allocation under the terms of its OATT effectively providing a greater congestion hedge to transmission customer exercising the firm OATT transmission rights (Table 5). For BAA B, ISO will allocate the $1,000 of congestion revenue to the EDAM entity associated with the 100 MW OATT CRN self-schedule where the transmission customer exercised their rights from the generator to the transfer location. For BAA C, ISO will allocate the $2,000 of congestion revenue to the EDAM entity associated with the 100 MW OATT CRN self-schedule where the transmission customer exercised their rights from the transfer location to BAA C load. The remaining congestion revenue is distributed to the BAA where the constraint is modeled.

Table 5: Final Proposal – refined design

MCC OFFSET	**MCC_T**	**MCC_A OFFSET by Breakdown**	**MCC_B OFFSET by Breakdown**	**MCC_C OFFSET by Breakdown**	**MCC_D OFFSET by Breakdown**
BAA_A MCC Total	**$(124,000)**	$(124,000)	$ -	$ -	$ -
BAA_B MCC Total	**$(4,000)**	$(3,000)	($1,000)	$ -	$ -
BAA_C MCC Total	**$(4,000)**	$(4,000)	$ -	($2,000)	$ -
BAA_D MCC Total	**$(3,800)**	$(3,800)	$ -	$ -	$ -
Overall STLMT	**($135,800)**	**($132,800)**	**($1,000)**	**($2,000)**	**$ -**
Congestion Allocation	**$135,800**	**$132,800**	**$1,000**	**$2,000**	**$ -**

Example 2 – Counter Flow Scenario

Like the predominant flow example, in the counter flow example, the market awards energy schedules for generation in BAA A, BAA B, and BAA C to meet load needs in BAA A, BAA b, BAA C, and BAA D. The market is performing congestion management on a binding constraint in BAA A from south to north direction for physical flow. However, the difference between the predominant flow and the counter flow example is the market solution economically schedules generation in BAA C to meet demand needs on BAA B and BAA D (See Figure 5). The energy flow from North the South for energy schedules between BAA C to BAA B. In other words, the energy is scheduled to flow in counter flow direction relative to the flow of the binding constraint.

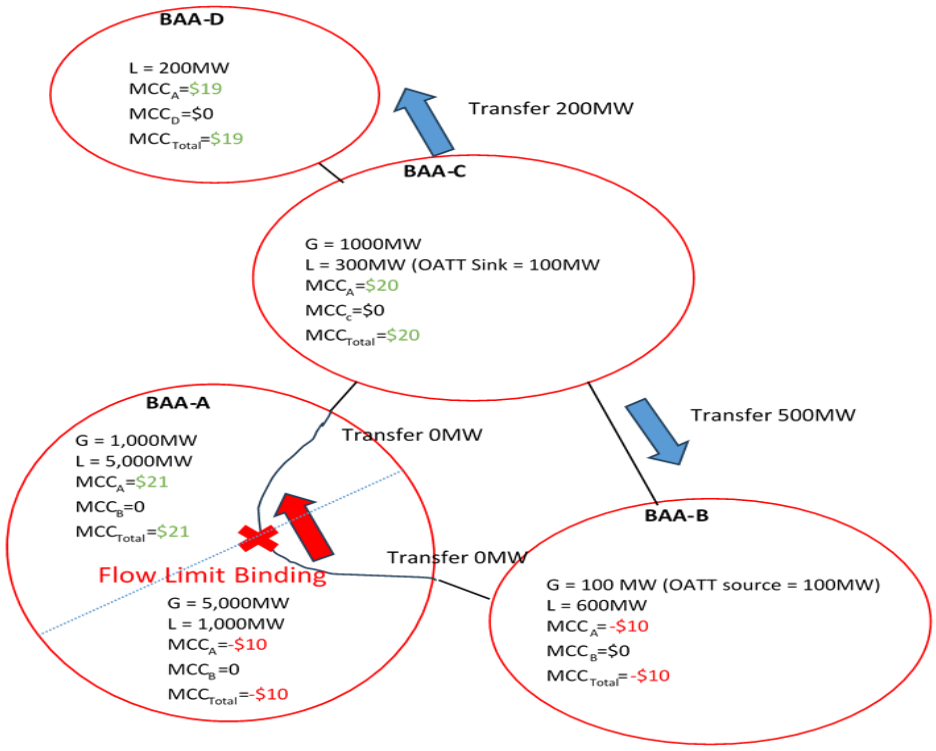


Figure 2: Counter Flow Solution when BAA A has Binding Constraint South to North

In BAA A, 6,000 MWs of internal generation has been dispatched to serve the 6,000 MWs of internal load. Of the 6,000 MWs supply dispatch, 1,000 MWs of generation south of the constraint served 1,000 MWs of load south of the constraint. An additional, 4,000 MWs of supply south of the constraint was dispatched to serve 4,000 MWs of BAA A load north of the constraint. The remaining 1,000 MW of BAA A load north of the constraint was served by generation north of the constraint.

In BAA B, 100 MWs of OATT self-schedules was dispatched to serve 100 MWs of OATT load in BAA C with a 500 MWs net import transfer from BAA C to BAA B. The 500 MWs net import transfer is comprised of a 600 MWs economic transfer from BAA C to BAA B and a 100 MWs self-schedule OATT Transfer from BAA B to BAA C.

In BAA C, 1,000 MWs of internal generation was dispatched to meet 200 MWs of internal load, 800 MWs to serve 600 MWs of BAA B load as well as 200 MWs of BAA D load. The remaining 100 MWs of BAA C load is being served by 100 MWs OATT import transfer from BAA B. This dispatch creates a 500 MWs net transfer from BAA c to BAA B as well as a 200 MWs Transfer from BAA C to BAA D to serve BAA D load.

Like the predominant flow example, the MEC across all four BAAs is $20. However, powerflow congestion assessment indicates that all energy schedules in EDAM BAAs external to BAA A have an effectiveness contribution on the binding constraint in BAA A. Depending upon effectiveness of the schedule on the constraint and relationship to the constraint, contributing or resolving the congestion, the subsequent impact on the MCC component of the nodal LMPs varies. In short, supply and demand south of the constraint has a negative MCC price, $(10), while the supply and load north of the binding constraint has a MCC, $21, $20, and $19 for BAA A, BAAC, and BAA D, respectively. The respective energy schedule and prices can be observed in Table 6.

Table 6: Counter flow awards and prices

		MW	LMP	MEC	MCC_A	MCC_B	MCC_C	MCC_D
BAA A	G_N	1,000	$41.00	$20.00	*$ 21.00*	$ -	$ -	$ -
	L_N	(5,000)	$41.00	$20.00	*$ 21.00*	$ -	$ -	$ -
	G_S	5,000	$10.00	$20.00	*$(10.00)*	$ -	$ -	$ -
	L_N	(1,000)	$10.00	$20.00	*$(10.00)*	$ -	$ -	$ -
	T_{AB}	-	$20.00	$20.00	$ -	$ -	$ -	$ -
	T_{AC}	-	$20.00	$20.00	$ -	$ -	$ -	$ -
BAA B	G_{OATT}	100	$10.00	$20.00	*$(10.00)*	$ -	$ -	$ -
	G	0	$10.00	$20.00	*$(10.00)*	$ -	$ -	$ -
	L	(600)	$10.00	$20.00	*$(10.00)*	$ -	$ -	$ -
	T_{AB}	-	$20.00	$20.00	$ -	$ -	$ -	$ -
	$T_{BC(OATT)}$	(100)	$20.00	$20.00	$ -	$ -	$ -	$ -
	T_{BC}	600	$20.00	$20.00	$ -	$ -	$ -	$ -
BAA C	G	1,000	$40.00	$20.00	*$20.00*	$ -	$ -	$ -
	L_{OATT}	(100)	$40.00	$20.00	*$20.00*	$ -	$ -	$ -
	L	(200)	$40.00	$20.00	*$20.00*	$ -	$ -	$ -
	T_{AC}	-	$20.00	$20.00	$ -	$ -	$ -	$ -
	$T_{BC(OATT)}$	100	$20.00	$20.00	$ -	$ -	$ -	$ -
	T_{BC}	(600)	$20.00	$20.00	$ -	$ -	$ -	$ -
	T_{CD}	(200)	$20.00	$20.00	$ -	$ -	$ -	$ -
BAA D	G	-	$39.00	$20.00	*$19.00*	$ -	$ -	$ -
	L	(200)	$39.00	$20.00	*$19.00*	$ -	$ -	$ -
	T_{CD}	200	$20.00	$20.00	$ -	$ -	$ -	$ -

Table 6 provides a summary of the settlement of market schedules including a 100 MWS of exercise OATT transmission rights as CRN self-schedules. Based upon the market settlement, BAA A net MCC settlement is $(124,000) where BAA A generation receive payments $91,000 while BAA A load is charged $(215,000). For BAA B, the net settlement is $5,000 where BAA B generation receive payments $1,000, BAA B load is charged $(6,000), and BAA B net transfer settlement is a charge of $10,000. For BAA C, the net settlement is $14,000 where BAA C generation receive payments $40,000, BAA C load is charged $(12,000), and BAA C net transfer settlement charge of ($14,000). Finally, BAA D's net settlement is $(3,800) where BAA D generation, which was not dispatched, receives a payment of $0, BAA D load is charged $(7,800), and BAA D net transfer settlement is $4,000.

Overall, the market footprint net settlement results in an over collection of congestion revenue of $108,800. In tables Table 11, Table 12, and Table 13, the ISO will compare the congestion revenue distribution under EDAM current FERC-approved design, the transitional alternative introduced in the Issue Paper, and the refined design described in this Final Proposal.

Table 7: Counter flow settlement

		LMP	MEC	MCC_A	MCC_B	MCC_C	MCC_D
BAA A	G_N	**$41,000**	**$20,000**	*$21,000*	$ -	$ -	$ -
	L_N	**$(205,000)**	**$(100,000)**	*$(105,000)*	$ -	$ -	$ -
	G_S	**$50,000**	**$100,000**	*$(50,000)*	$ -	$ -	$ -
	L_N	**$(10,000)**	**$(20,000)**	*$10,000*	$ -	$ -	$ -
	T_{AB}	**$ -**	**$ -**	*$ -*	$ -	$ -	$ -
	T_{AC}	**$ -**	**$ -**	*$ -*	$ -	$ -	$ -
BAA A STLMT		**$(124,000)**	**$ -**	*$(124,000)*	$ -	$ -	$ -

BAA B	G_{OATT}	**$1,000**	**$2,000**	*$ (1,000)*	$ -	$ -	$ -
	G	**$ -**	**$ -**	*$ -*	$ -	$ -	$ -
	L	**$(6,000)**	**$(12,000)**	*$ 6,000*	$ -	$ -	$ -
	T_{AB}	**$ -**	**$ -**	*$ -*	$ -	$ -	$ -
	$T_{BC(OATT)}$	**$(2,000)**	**$(2,000)**	*$ -*	$ -	$ -	$ -
	T_{BC}	**$12,000**	**$12,000**	*$ -*	$ -	$ -	$ -
BAA B STLMT		**$5,000**	**$ -**	*$5,000*	$ -	$ -	$ -

BAA C	G	**$40,000**	**$20,000**	*$20,000*	$ -	$ -	$ -
	L_{OATT}	**$(4,000)**	**$(2,000)**	*$(2,000)*	$ -	$ -	$ -
	L	**$(8,000)**	**$(4,000)**	*$(4,000)*	$ -	$ -	$ -
	T_{AC}	**$ -**	**$ -**	*$ -*	$ -	$ -	$ -
	$T_{BC(OATT)}$	**$2,000**	**$2,000**	*$ -*	$ -	$ -	$ -
	T_{BC}	**$(12,000)**	**$(12,000)**	*$ -*	$ -	$ -	$ -
	T_{CD}	**$(4,000)**	**$(4,000)**	*$ -*	$ -	$ -	$ -
BAA C STLMT		**$14,000**	**$ -**	*$ 14,000*	$ -	$ -	$ -

BAA D	G	**$ -**	**$ -**	*$ -*	$ -	$ -	$ -
	L	**$(7,800)**	**$(4,000)**	*$(3,800)*	$ -	$ -	$ -
	T_{CD}	**$4,000**	**$4,000**	*$ -*	$ -	$ -	$ -
BAA D STLMT		**$(3,800)**	**$ -**	*$(3,800)*	$ -	$ -	$ -

In the ISO tariff filed mechanism, the congestion revenue is allocated to the BAA where the constraint is modeled (Table 8).

Table 8: Current Marginal Cost of Congestion distribution of counterflow

MCC OFFSET	**MCC_T**	**MCC_A OFFSET by Breakdown**	**MCC_B OFFSET by Breakdown**	**MCC_C OFFSET by Breakdown**	**MCC_D OFFSET by Breakdown**
BAA_A MCC Total	**$(124,000)**	$(124,000)	$ -	$ -	$ -
BAA_B MCC Total	**$5,000**	$5,000	$ -	$ -	$ -
BAA_C MCC Total	**$14,000**	$14,000	$ -	$ -	$ -
BAA_D MCC Total	**$(3,800)**	$(3,800)	$ -	$ -	$ -

Overall STLMT	**$(108,800)**	**$(108,800)**	**$ -**	**$ -**	**$ -**
Congestion Allocation	**$108,800**	**$108,800**	**$ -**	**$ -**	**$ -**

The issue paper transitional mechanism allocates congestion revenue/rents to the BAA where the congestion was collected or paid (Table 9).

Table 9: Issue Paper transitional alternative approach of Marginal Cost of Congestion distribution for counter flow

MCC OFFSET	**MCC_T**	**MCC_A OFFSET by Breakdown**	**MCC_B OFFSET by Breakdown**	**MCC_C OFFSET by Breakdown**	**MCC_D OFFSET by Breakdown**
BAA_A MCC Total	**$(124,000)**	$(124,000)	$ -	$ -	$ -
BAA_B MCC Total	**$5,000**	$ -	$5,000	$ -	$ -
BAA_C MCC Total	**$14,000**	$ -	$ -	$14,000	$ -
BAA_D MCC Total	**$(3,800)**	$ -	$ -	$ -	$(3,800)
Overall STLMT	**$(108,800)**	**$(124,000)**	$5,000	$14,000	$(3,800)
Congestion Allocation	**$108,800**	**$124,000**	**$(5,000)**	**$(14,000)**	**$3,800**

In the refined transitional mechanism, the congestion revenue associated to balanced OATT self-schedules in BAA B and BAA C is allocated to the EDAM Entity of the BAA where OATT rights are exercised. The EDAM Entity will consider this congestion revenue when providing the hedge to transmission customer who exercised its transmission rights (Table 10). For BAA B, ISO will allocate the $1,000 of congestion revenue to the EDAM entity associated with the 100 MW OATT CRN self-schedule where the transmission customer exercised their rights from the generator to the transfer location. For BAA C, ISO will allocate the $2,000 of congestion revenue to the EDAM entity associated with the 100 MW OATT CRN self-schedule where the transmission customer exercised their rights from the transfer location to BAA C load. The remaining congestion revenue is distributed to the BAA where the constraint is modeled.

Table 10: Final Proposal refined design

MCC OFFSET	**MCC_T**	**MCC_A OFFSET by Breakdown**	**MCC_B OFFSET by Breakdown**	**MCC_C OFFSET by Breakdown**	**MCC_D OFFSET by Breakdown**
BAA_A MCC Total	**$(124,000)**	$(124,000)	$ -	$ -	$ -
BAA_B MCC Total	**$5,000**	$6,000	$ (1,000)	$ -	$ -
BAA_C MCC Total	**$14,000**	$16,000	$ -	$(2,000)	$ -
BAA_D MCC Total	**$(3,800)**	$(3,800)	$ -	$ -	$ -
Overall STLMT	**$(108,800)**	**$(108,800)**	**$(1,000)**	**$(2,000)**	**$ -**
Congestion Allocation	**$108,800**	**$105,800**	**$1,000**	**$2,000**	**$ -**

Attachment D – Board Memo

Tariff Amendment – EDAM Congestion Revenue Allocation

California Independent System Operator Corporation

June 26, 2025

California ISO | WESTERN ENERGY MARKETS

Memorandum

To: ISO Board of Governors and Western Energy Markets Governing Body

From: Anna McKenna, Vice President Market Design and Analysis

Date: June 12, 2025

Re: **Decision on EDAM congestion revenue allocation**

This memorandum requires ISO Board of Governors and WEM Governing Body action.

EXECUTIVE SUMMARY

Management proposes transitional changes to the allocation of congestion revenues among balancing areas participating in the Extended Day-Ahead Market (EDAM). This proposal addresses a concern raised during PacifiCorp's tariff revision process to implement EDAM. Specifically, the concern is that EDAM balancing areas may not receive congestion revenues to provide a sufficient hedge for congestion costs for transmission customers exercising their firm point-to-point transmission rights reserved under the Open Access Transmission Tariff (OATT). A CAISO transitional solution, in lieu of the previously FERC approved EDAM design, we believe, is the best means to address the concern.

The proposed transitional change would, under limited circumstances, allocate a portion of day-ahead parallel flow congestion revenues to the EDAM balancing area where market participants have paid prices that include those congestion costs, rather than to the balancing area where the constraint occurs. In markets that span multiple balancing authority areas, a transmission constraint in one area can impact prices in another, resulting in "parallel flow" congestion revenue. The EDAM balancing area receiving the parallel flow congestion revenue can use it to manage the cost of congestion for those transmission customers exercising their eligible firm transmission rights.

The proposal includes a commitment to monitor the performance and impacts of this transitional change. It outlines the specific congestion-related metrics that will be monitored and how that information will be shared with stakeholders. Management will initiate the next phase of stakeholder processes ahead of EDAM's launch to explore near-term enhancements and a long-term design for congestion revenue allocation.

The near-term enhancements will focus on: (1) addressing the limited applicability of this approach to participants that, among other criteria, self-schedule their resources in the market, and (2) developing a treatment for congestion revenue rights within the

CAISO balancing area that is comparable to the treatment afforded to OATT transmission rights. The long-term discussion will take a more comprehensive look at how congestion revenues are allocated across the EDAM market footprint, with the goal of delivering a recommendation within 12 to 24 months.

This proposed change to congestion revenue allocation is a necessary transitional measure for EDAM, aimed at supporting transmission customers exercising their OATT transmission rights in delivering power without facing congestion cost risks they cannot effectively hedge. This proposed change directly advances the transition to EDAM, which will enable more effective and efficient dispatch solutions, obviates any reason to carve out transmission rights, and delivers benefits to all EDAM participants.

Moved, that the ISO Board of Governors and WEM Governing Body approve the EDAM congestion revenue allocation proposal as described in the memorandum dated June 11, 2025; and

Moved, that the ISO Board of Governors and WEM Governing Body authorize Management to make all necessary and appropriate filings with the Federal Energy Regulatory Commission to implement the changes proposed in this memorandum, including any filings that implement the overarching initiative policy but contain discrete revisions to incorporate Commission guidance in any initial ruling on the proposed tariff amendment.

BACKGROUND

The Extended Day Ahead Market (EDAM) models all resources and the full capability of the transmission system within participating balancing areas, including flow-based transmission system constraints. This robust modeling enables optimal commitment and dispatch of a diverse resource fleet across interconnected transmission systems to serve demand within the market footprint. Transmission constraints are reflected in the market model and when they bind, can affect the congestion price component of locational marginal prices at pricing locations across the market footprint.

The market optimization software treats all demand and supply across the footprint as part of a single integrated market. Consequently, a transmission constraint in one EDAM balancing area can influence the congestion price component of the local marginal prices at pricing locations in neighboring balancing areas. Because of this price separation, amounts the market operator pays to suppliers will be less than amounts paid by market participants, resulting in congestion revenue or rents. The market operator must allocate these congestion revenues and remain revenue neutral and, under the EDAM design, distributes these revenues to the EDAM balancing areas. Each balancing area then further sub-allocates these revenues among their transmission customers under the terms of their FERC-approved tariffs.

The current FERC-approved EDAM design allocates these congestion revenues to the EDAM balancing area where the transmission constraint occurs. The balancing area receives all congestion revenues associated with the specific transmission constraint,

including those paid by market participants in a neighboring area due to parallel flow effects. This design, which is consistent with cost causation principles and provides incentives to minimize parallel flow, is currently in effect in the WEIM. Managing congestion caused by a transmission constraint is the responsibility of the balancing area where it occurs.

Earlier this year, PacifiCorp filed revisions to its OATT with FERC to participate in the EDAM. Commenters in the pending proceeding expressed concerns rooted in the EDAM design for congestion revenue allocation. A key concern was that the market operator may not allocate sufficient congestion revenues to the EDAM balancing area to support sub-allocation to transmission customers and protect them from congestion costs for exercising their firm OATT transmission rights. Consequently, the ISO committed to an expedited stakeholder initiative to evaluate potential mechanisms for allocating parallel flow congestion revenues.

The ISO promptly commenced this initiative, publishing an issue paper on EDAM Congestion Revenue Allocation on March 17, 2025, and subsequently releasing multiple proposal iterations and holding full-day stakeholder workshops. These efforts aimed to describe and ensure a common understanding of the existing FERC-approved EDAM design for congestion revenue allocation and to evaluate potential alternative approaches to allocation of parallel flow congestion revenues.

PROPOSAL

Management proposes a targeted change to how the market operator allocates parallel flow congestion revenues among EDAM balancing areas. This aims to enhance congestion cost protections for transmission customers exercising eligible firm transmission rights under the terms of the EDAM entity's OATT. In so doing, the proposal addresses concerns raised in the PacifiCorp proceeding and fulfills the ISO's commitment to find a solution.

Management proposes narrowly allocating day-ahead parallel flow congestion revenues associated with eligible OATT uses to the EDAM balancing area where market participants have paid market prices that include these congestion costs, i.e., where the congestion revenues are collected. This would be limited to parallel flow congestion revenue associated with submitted and cleared day-ahead balanced source and sink self-schedules associated with eligible firm transmission rights. This would enable the EDAM entity to further sub-allocate the congestion revenues received from the market operator to its transmission customers, providing them more complete protection from market congestion costs.

Any remaining parallel flow congestion revenues that are collected in an EDAM balancing area due to a transmission constraint in a neighboring EDAM balancing area will be allocated to the area where the constraint occurs, consistent with the current FERC-approved EDAM design.

With this proposed change, the allocation of congestion revenues in EDAM is as follows:

- **Internal Congestion Revenue**: An EDAM balancing area will continue to be allocated internal congestion revenues collected as a result of a transmission constraint within its balancing area, consistent with the current FERC-approved design.
- **Parallel Flow Congestion Revenues**: Under defined conditions, the market operator will allocate parallel flow congestion revenues to the EDAM balancing area where the congestion revenues are collected (not where the transmission constraint occurs). This allocation will be based on the exercise of eligible firm transmission rights reflected in submitted and cleared balanced self-schedules. Eligible firm transmission rights consist of long-term firm and monthly firm point-to-point and network integration transmission service rights, including conditional firm, as defined under the EDAM entity OATT.
- **Remaining Parallel Flow Congestion Revenues**: The market operator will allocate any remaining parallel flow congestion revenues to the EDAM balancing area where the transmission constraint occurred, consistent with the current FERC-approved design.

This would apply only in the day-ahead market. Management does not propose to modify the current method of congestion revenue allocation in the WEIM.

Unlike neighboring balancing areas, the CAISO does not offer point-to-point or network integration transmission service products to which parallel congestion revenue can be assigned. Instead, the CAISO distributes congestion revenue in its balancing area through financial congestion revenue rights that are not tied to the use of the system in the day-ahead market. Due to this inherent difference in how congestion revenue is allocated – and due to the specific functionality that will be used to implement the proposed design – this near-term proposal does not include a mechanism for the CAISO balancing area to be allocated similar parallel flow congestion revenues. This means that the congestion allocated to the CAISO balancing area would not include parallel flow congestion revenue collected in the CAISO balancing area driven by a transmission constraint in a neighboring EDAM area. However, relative to today, the CAISO balancing area will be allocated new additional congestion revenues, which will come from residual or remaining parallel flow congestion revenues collected in other EDAM balancing areas that are not associated with the exercise of firm rights in neighboring areas. Management will also explore potential congestion revenue rights modeling enhancements, through a separate process, to reduce the impact of parallel flows from neighboring EDAM balancing areas on the funding of released congestion revenue rights.

Management commits to initiating working groups before EDAM launches in 2026, to explore both near-term enhancements and development of a long-term, durable design. An important aspect of the evolution will be monitoring how the proposed congestion revenue allocation affects EDAM balancing areas and the CAISO balancing area. This insight will help guide future enhancements and shape a scalable design.

The ongoing stakeholder process will be as follows:

- **Re-engage stakeholder working groups before EDAM go-live:** The working groups will evaluate near-term enhancements and explore a spectrum of long-term design alternatives informed by market operational experience.
- **12- to 24-month stakeholder process:** During this period, the ISO will provide quarterly updates to the ISO Board of Governors and the Western Energy Markets (WEM) Governing Body on the status of the initiative, data and metrics from monitoring the current proposal, and timelines for implementing the various design options under consideration. By the end of this period, the ISO will present a refined proposal developed through stakeholder input.
- **Filing and implementation**: If the proposal is approved, the ISO will file it with FERC with the goal of implementing the new design in the third year of EDAM operations.

Management anticipates near-term enhancements can be implemented within, or shortly after, the first year of operations (2027). A key near-term enhancement would expand the allocation of congestion revenues from parallel flows for the exercise of eligible firm transmission rights beyond those self-scheduled, in a manner that better incentivizes economic bids and more efficient market behavior. A second key enhancement would establish reciprocal treatment for the CAISO balancing area by allocating parallel flow congestion revenue arising from a transmission constraint in a neighboring EDAM balancing area to support affected congestion revenue rights on the CAISO system. Management commits to a thorough stakeholder process to refine the proposal and present it to the ISO Board of Governors and WEM Governing Body within the first year of EDAM operations to enable prompt implementation.

STAKEHOLDER FEEDBACK

Management appreciates the extensive stakeholder engagement on this expedited initiative. The ISO published four papers for this initiative (an Issue Paper, Draft Final Proposal, Revised Draft Final Proposal, and a Final Proposal), and held three workshops to discuss the proposal. Stakeholders submitted a total of 69 sets of written comments, all of which helped inform and further refine this proposal.

The large majority of stakeholders broadly support, or do not oppose, the described proposal as an acceptable or reasonable compromise to support EDAM launch. They recognize it as responsive to the initial concerns raised and an improvement compared to the current design. Stakeholders underscored that the proposal is intended to be an interim solution, and expect that the ISO and stakeholders will continue to collaborate on near-term enhancements within the first year of EDAM operations, and work toward a durable long-term congestion revenue allocation design as noted above. Moreover, stakeholders support re-engaging in these discussions prior to the launch of EDAM in 2026.

Some stakeholders oppose the proposal for two primary reasons: either they (1) prefer a holistic, long-term design over interim measures, or (2) are concerned that the proposal could apply to OATT transmission rights established after EDAM launch. ISO Management believes there is enough support to evolve the design over time, including

within the first year of EDAM operations, informed by operational experience, analysis and stakeholder input.

With regards to whether the proposal should apply only to currently held transmission rights rather than those that may be acquired in the future, the ISO acknowledges the concern, but identifies several mitigating factors. First, as a practical matter, the ability to acquire new long-term firm transmission in the West is severely limited. Additionally, any attempt to "grandfather" certain OATT rights would need to also contend with the implications simply for future load growth. Finally, long-term design discussions will consider different frameworks for thinking about parallel flow between EDAM balancing areas, such as flow entitlements, that would move away from tying congestion revenue allocation to the specific exercise of firm transmission rights. Separately, a number of stakeholders also suggested establishing provisions that would enable carve out of transmission capacity from the market optimization as a way to mitigate exposure to congestion costs and allow for the transmission to be optimized in other markets. While this concept was considered as out of scope since it raises broader issues beyond this narrow initiative, the proposed design nevertheless obviates the need for broad carve out provisions from the market.

Throughout the initiative, the ISO sought to be responsive to stakeholder concerns raised within the different iterations of the proposal. One such concern that stakeholders expressed was that the proposed design may incentivize broad self-scheduling of generation across the EDAM footprint, thereby reducing market efficiency. The ISO describes in the final proposal why this incentive may not be widespread. To further address this concern, the ISO introduced consideration of a near-term enhancement within the first year of EDAM operations, which could reduce the self-scheduling incentive. Another stakeholder concern centered on the need to develop a treatment for congestion revenue rights that is comparable to that afforded OATT transmission rights in order to create parity for the CAISO balancing authority. The ISO responded with a plan to pursue this through a near-term enhancement within the first year of EDAM operations as well.

Stakeholders also sought clarity on how congestion revenue rights will be settled once EDAM goes live, when the footprint of the day ahead market will be larger than the congestion revenue rights market. The ISO clarified that the rules and intent behind these allocations and payments are unchanged due to EDAM. Because these questions on congestion revenue rights settlement and modeling in EDAM arise regardless of the congestion revenue allocation proposal, the ISO hosted a separate stakeholder workshop to clarify implementation of congestion revenue rights under EDAM and will continue these discussions with stakeholders.

Stakeholders highlighted the importance of closely monitoring congestion patterns across the EDAM footprint, the location and effect of transmission constraints on prices, the magnitude of allocated congestion revenues and patterns of self-scheduling in the market. In response to these requests, the proposal describes plans for detailed monitoring and regular forums through which the ISO would share this information with

market participants. This operational information will help inform further evolution of the design.

Another key area of stakeholder emphasis has been the need to establish a plan for continued engagement and transition to a long-term durable design on a defined timeline. Stakeholders want the ISO to ensure there is a forum for consideration of a long-term design for congestion revenue allocation as the EDAM footprint grows. To that end, the ISO has committed to re-engage stakeholders in working groups prior to launch of EDAM in 2026 to discuss both near-term and long-term design enhancements. The ISO's commitment is to bring forward a long-term design proposal for approval within 12-24 months. This timeline would enable implementation during the third year of EDAM operations.

The Market Surveillance Committee (MSC) expressed concern with aspects of the proposal and the potential adverse impacts, which are difficult to ascertain based on available information. The MSC also cautions against extending this approach into near-term enhancements and instead proceed with flow-based rights to address the need for hedges in neighboring participating areas. Management commits to further analysis and monitoring prior to implementation and for consideration of future enhancements in the stakeholder process commencing prior to the launch of EDAM.

CONCLUSION

Management proposes to modify the EDAM design to allow the market operator to allocate congestion revenues from parallel flows among EDAM balancing areas as outlined in this proposal. This re-allocation of additional congestion revenues can then be further distributed by EDAM entities under their OATTs to transmission customers with eligible firm transmission rights, helping to provide congestion cost protection and support a smoother transition into EDAM. Management also commits to working with stakeholders to explore both near-term enhancements and longer-term solutions.

Management recommends that the ISO Board of Governors and Western Energy Markets Governing Body approve the proposal as described in this memorandum.

California ISO | WESTERN ENERGY MARKETS

ISO Board of Governors and WEM Governing Body Joint General Session **June 19, 2025**

Decision on extended day-ahead market congestion revenue allocation

Motion

Moved, that the ISO Board of Governors and WEM Governing Body approve the EDAM congestion revenue allocation proposal as described in the memorandum dated June 11, 2025; and

Moved, that the ISO Board of Governors and WEM Governing Body authorize Management to make all necessary and appropriate filings with the Federal Energy Regulatory Commission to implement the changes proposed in this memorandum, including any filings that implement the overarching initiative policy but contain discrete revisions to incorporate Commission guidance in any initial ruling on the proposed tariff amendment.

WEM Governing Body vote: 5-0 **ISO Board of Governors vote: 5-0**		**Action: Passed**						
Name	**Position**	**Body**	**Move/ Second**	**Yes BoG**	**No BoG**	**Yes GB**	**No GB**	**Other**
Borenstein	Chair	Board		X				
Campbell	Member	GB				X		
Decker	Member	GB	Seconded			X		
Eto	Vice Chair	Board		X				
Galiteva	Governor	Board		X				
Kondziolka	Chair	GB				X		
Leslie	Governor	Board		X				
Prescott	Member	GB	Moved			X		
Schori	Member	Board		X				
Wagner	Vice Chair	GB				X		
Vote Count	**10-0**			**5**		**5**		